

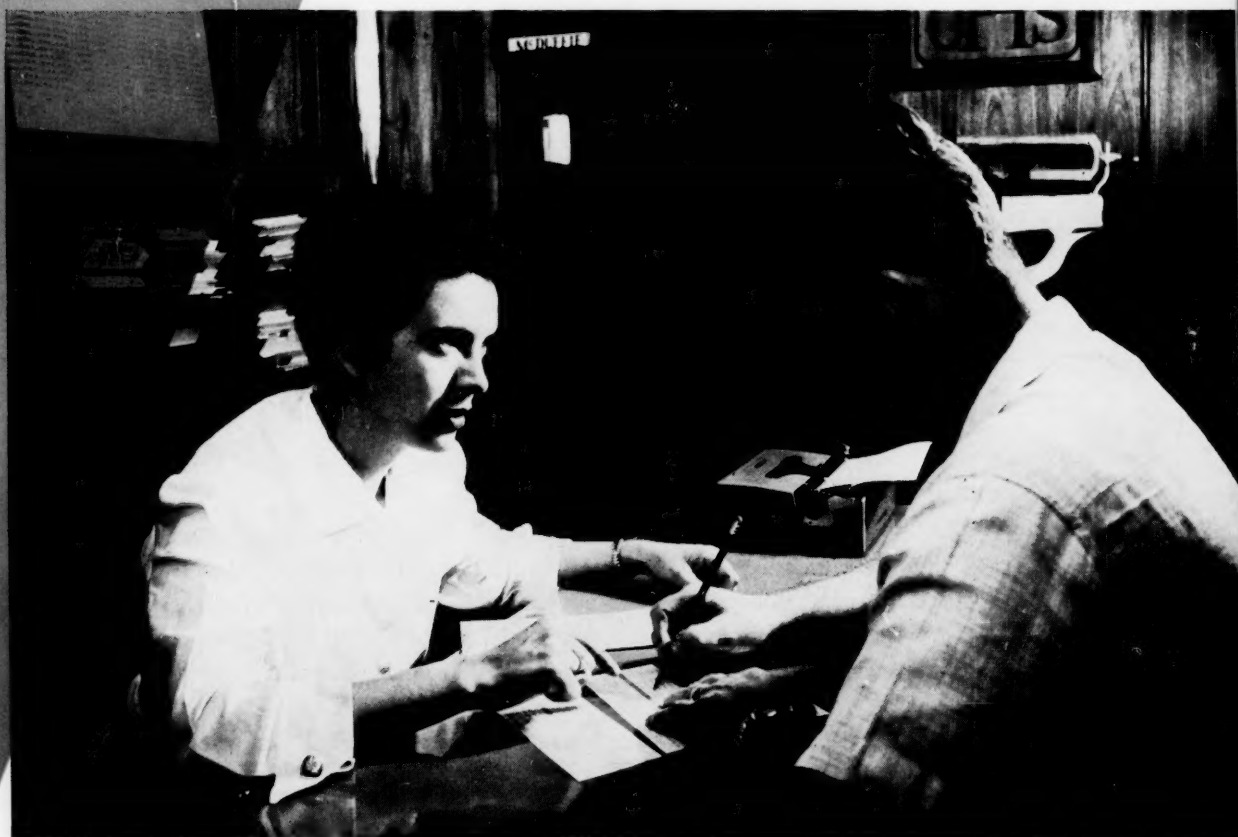
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# manufacturers record

THE NEWSMAGAZINE OF THE INDUSTRIAL SOUTH AND SOUTHWEST

Industrial Expansion .....	p. 9
New Plant Summary .....	p. 18
Research and Development .....	p. 21
Kentucky Industrial Tour .....	p. 28
Regional Reports .....	p. 34



New challenge to plant management—have you set up an adequate health program for your workers? (p. 30).

A CONWAY PUBLICATION EST. 1882

# 3 ways to improve laboratory efficiency



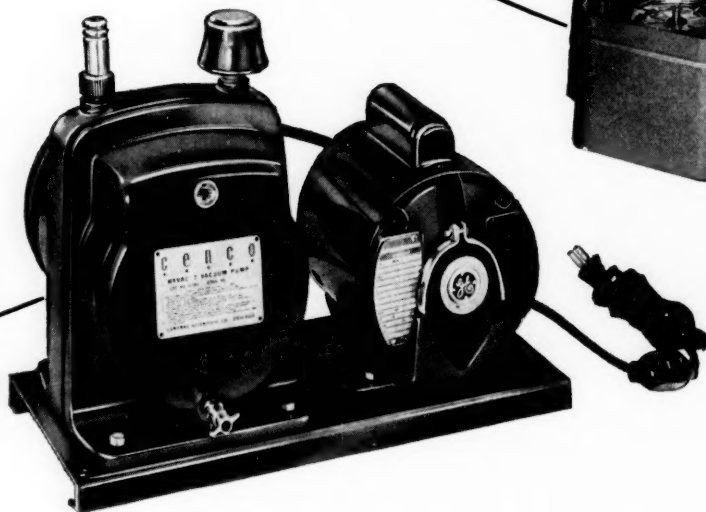
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## Manufacturers record

NEWSMAGAZINE OF SOUTHERN  
SCIENCE AND INDUSTRY—EST. 1882

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**EPA**

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TRADE MARK

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The bank  
that knows its neighbors

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Sounds like music to my ears, but how do I know  
you're in the right key? Let me hear more about:

Name \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_

Zone \_\_\_\_\_ State \_\_\_\_\_

#### LETTERS

**SIRS:** Our President, Mr. K. H. Gayle, Jr., formerly of Ingalls, has for quite some time touted your book as highly desirable for future consideration in our advertising program. Up until the arrival of your October edition, this has been a rather one-sided argument. After his reviewing the page 10 photo (Moynahan and Associates Release) of the giant tower we built for Esso and noting that a complete line including the manufacturer's name was edited... I have gained a most enthusiastic confederate.

To edit a release is a magazine's prerogative, and to delete obvious areas of commercialism is occasionally done (not by the larger books), but to grossly discriminate between contractor and contractee is unusual.

My earlier plan was to enumerate our past accomplishments and the wide area of similarly fantastic projects completed in the huge (and still growing) facilities of Delta. I shall not take your time. In news parlance, "EST"—Biggest, Largest, Oldest, Etc., generally receives attention.

What... Oh, What have we done to deserve this?

MAX FETTY, Vice President  
Advertising and Sales Promotion  
Delta Tank Manufacturing Co.  
Baton Rouge, Louisiana

► Aw shucks fellas we didn't mean to "discriminate" against you. Guess our layout man was so impressed with that big tank of yours that he unconsciously omitted the name of your firm, which as we all know is a very fine one. Our sincere apologies.

**SIRS:** It is the mission of the Third Army to defend this area against disaster and enemy action. Successful accomplishment of this mission demands extensive knowledge of the area. It has been found that many civil agencies compile information from which can be gleaned many specific facts of value to the Army in becoming familiar with the characteristics of the area, and which can be used for future planning.

Recently, you published a series of articles concerning a number of cities which lie within Third Army's seven state area of interest. One of these articles was entitled, "Columbia—The Uncut Gem," and appeared in the November-December 1955 issue.

WILLIAM H. SMITH  
Lt. Colonel, Arty  
44th and 170th Strategic  
Intelligence Detachments  
Fort McPherson, Ga.

**SIRS:** I have read with keen interest the September issue of MANUFACTURERS RECORD and I know succeeding issues are going to prove of great value to me in getting started as a manufacturer's representative in the Southeast.

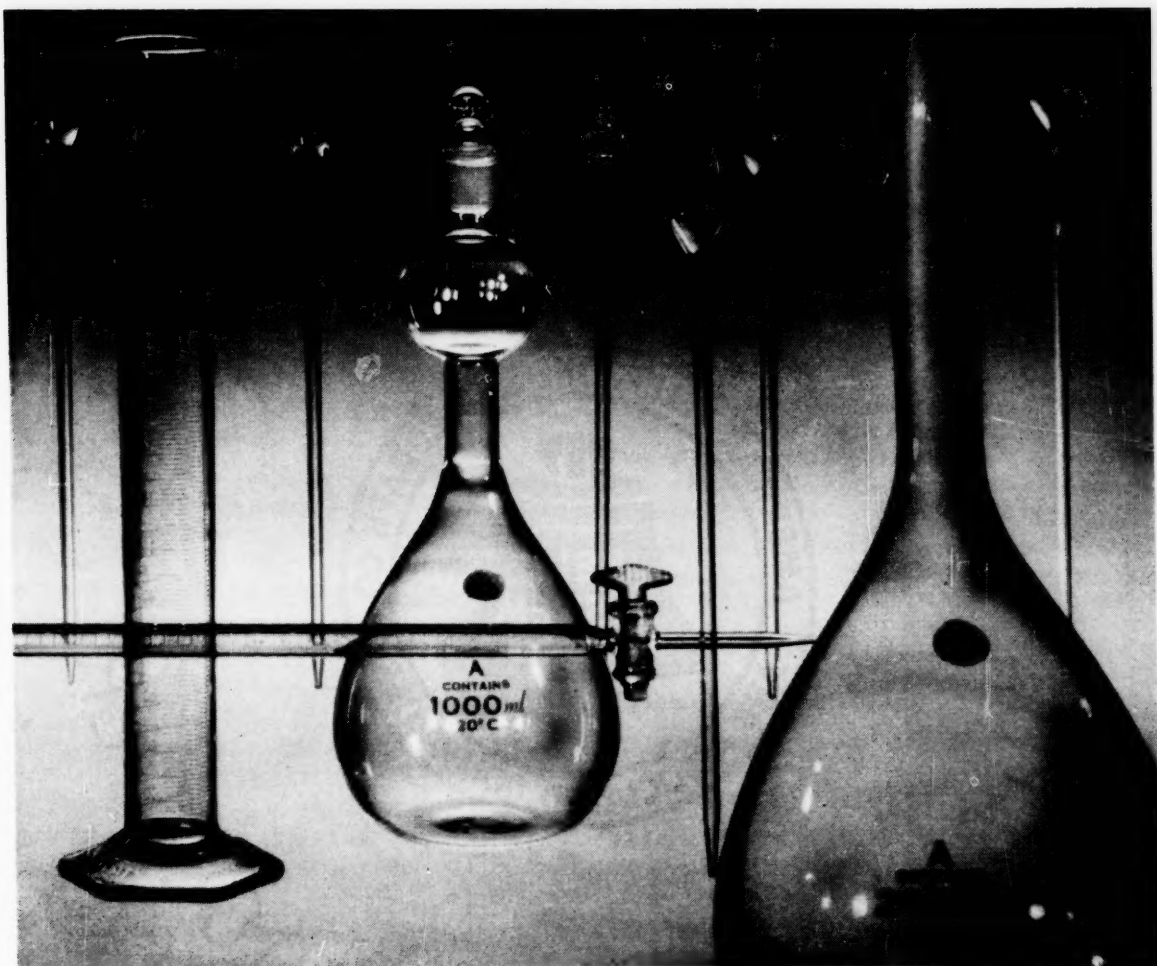
Under "Letters to the Editor" in your September issue I noted a letter written by a Mr. R. V. Robison on page 3 giving reference to an electronics map of the South.

Is this map something that you have already printed in one of your previous issues or is it something you are contemplating publishing? This map would prove of great value to me and if it has been previously published in one of your issues I would greatly appreciate receiving a copy of same...

Thank you for your cooperation on this subject.

JOHN L. TRUESDALE  
2373 McMullen Circle  
Raleigh, N. C.





Precision graduated for perfectionists . . .

## PYREX brand labware

To say it another way—"A" is for accuracy and that's what you get in PYREX brand graduated laboratory ware.

Each piece of our volumetric glassware bearing the letter "A" tells you it meets *Guaranteed Class A Capacity Tolerances as set forth by the National Bureau of Standards.*

As for transfer pipettes, we go to

extremes to see that they hold what the lines say they do. We make our burettes with a special precision bore, the purpose of which is to provide extremely fine accuracy between any two points. And with certain special graduated items, we enclose a Corning Certificate of Accuracy . . . an ironclad, gilt-edged testimony to precision calibrations.

If you are a perfectionist by nature or by occupation, PYREX brand graduated ware will please you. Your Corning Laboratory Supply Dealer will gladly fill your requirements.

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*Corning means research in Glass*



**PYREX® laboratory ware**

*. . . the tested tool of modern research*



For many a year, the Bell seal has been the signpost of telephone service. A little while ago we got to thinking that such a well-known symbol deserved a slogan.

We found six words that seem to sum up the story of the telephone and the telephone business . . . "Working Together to Bring People Together."

"Working Together" describes the spirit and co-operation of the telephone companies and the thousands of telephone men and women who help to provide the service.

"To Bring People Together" describes the greatest use of the telephone.

It is priceless in emergencies and indispensable in saving steps and

time and getting things done. And one of its biggest values is in helping people keep in touch with each other.

Many a day is brightened just because someone reached for the telephone to exchange news and good wishes and a friendly greeting.

Isn't there someone you'd like to call right now?

BELL TELEPHONE SYSTEM



TUNE IN "TELEPHONE TIME" . . . The TV program with John Nesbitt's real life stories the whole family can enjoy together . . . Every Sunday over CBS . . . See your local newspaper for time and channel.

## For Better Or For Worse?

By FRED G. CLARK and RICHARD STANTON RIMANOCZY  
American Economic Foundation

### I

The 20th Century has seen the birth of a new superstition, namely, that all social change is automatically for the better.

The broad and deep acceptance of this myth is shown by the transformation that has overtaken the dictionary meaning of the word "reform" (which simply means to form again, perhaps for better, perhaps for worse).

The purpose of the dictionary is not simply to record the original meaning of words: it records what those words mean to the people as indicated by common usage.

So it is significant to find that Webster's first definition of "reform" is: *to change into a new and improved condition.*

A person who wants social change is called a reformer, and this definition automatically labels him as a person who wants to change the world into a "new and improved condition."

Those of us who accept this myth are called "liberals" and "progressives" because, theoretically, we are in favor of "new and improved conditions" for mankind.

Those of us who critically question the automatic benefits of social change are called "conservatives" and "reactionaries" because we drag our feet when someone wants to rush us into a new program.

### II

There is a trite but true saying that "the only thing that history teaches is that history teaches us nothing," meaning that no generation will be guided by the "social science" mistakes of previous generations.

If physical science had proceeded along the same lines followed by social science, it would never have gotten beyond the wheel and lever because there would have been no accumulation of accepted principles.

In a way this is good (because every obstacle to a better life should be challenged), but in another way it is bad because it makes us suckers for phony propositions.

The advocates of social change who want to achieve political power by taking away our liberty have always skillfully dramatized the *selfish advantages of surrendering personal liberty*, and in the hands of an expert, this surrender can be made to look as if we were *gaining more freedom* (mostly freedom from personal responsibility).

And it can be made to look very attractive.

### III

There can be no doubt that continuous change is inevitable because nothing in this world can stand still: it either moves ahead or moves backward.

So it is with human societies: they must keep changing either for better or for worse.

So it behooves all of us to be skeptical of every proposed change until we have thought it all the way through.

A classic example of this healthy skepticism is to be found in our early history when the 13 States were asked to approve the newly written Constitution.

The citizens of this new nation had just learned the hard way that "eternal vigilance is the price of liberty," and they were not going to take any changes of throwing it away.

The new Constitution *looked* all right, but *was* it?

It *seemed* to protect individual liberty, but *did* it?

So the American people thought it all the way through, and to *make sure* that there were no "sleepers" in it, insisted on certain *extra assurances*, which are now known as the Bill of Rights.

The need for "eternal vigilance" throughout the world today has never been greater.

Here in America where we still have our liberty, the vigilance is of the utmost importance.

Let's remember, any proposal that cannot be *completely* explained and approved is not to be trusted.

*We must not let the "experts" tell us we are "too dumb to understand."*



# Kinnear Steel Rolling Doors

## They "Go Out Of The Way" to CUT COSTS

You get highest efficiency at doorways—plus a double bonus in longer low-cost service and extra protection—when you install Kinnear Steel Rolling Doors.

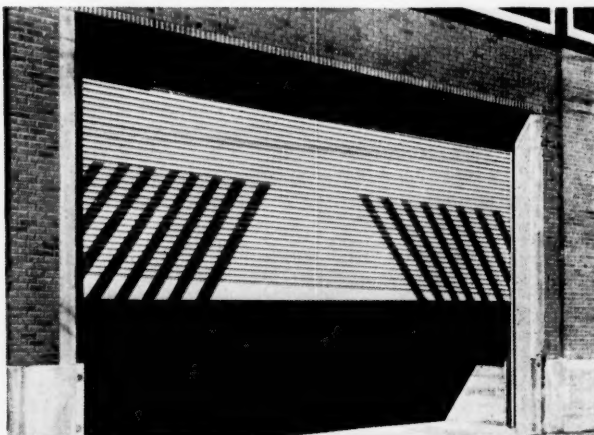
They open straight upward, save time and space by coiling freely and compactly above the doorway. *All* floor, wall and ceiling space around the doorway is fully usable at all times—even while the door is in operation. Light from close-by windows or lighting fixtures is never blocked off.

And Kinnear Rolling Doors permit full use of all kinds of hoist, crane or conveyor equipment.

Kinnear Rolling Doors are built any size, with manual, mechanical or electric motor operation. Controls for power-operated doors may be placed at any number of convenient points. For longest, lowest-cost door service at highest efficiency, install Kinnear Steel Rolling Doors. Write today for details—or for recommendations to fit your needs.

## GALVANIZED For Lifetime Door Service

For extra years of low-maintenance service, the rugged interlocking-slat curtain of every Kinnear Steel Rolling Door is thoroughly galvanized with a heavy coat of pure zinc (1.25 ounces per square foot of metal, ASTM standards). Then Kinnear's own Paint Bond process makes sure you get quick, thorough coverage and permanent adhesion of paint you can apply as soon as the doors are erected.



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# MANUFACTURERS RECORD

## (IN REVIEW)



NOVEMBER 1883

(AS ABSTRACTED MORE THAN 70 YEARS LATER)

BALTIMORE, MD.

### A Marvelous Showing

The *New Orleans Times-Democrat*, in a late issue, gave a general summary of the condition of the Southern States, as gathered from official sources, which makes such a marvelous exhibit of the progress of that section during the last four years as to command the attention of the civilized world. Never before, we venture to say, has any country been able to make such a magnificent exhibit while hampered and restricted in its development as the South has been since the war. Laboring under losses that were counted by the billions of dollars, her best and most enterprising citizens either dead or scattered throughout other sections, with her labor system completely disorganized and a pall of gloom hanging over everything, there seemed but little prospect eighteen years or even ten years ago of that wonderful future upon which she has now entered and which is already attracting the attention of the world. We have seen the Southern people awakening from the lethargy of the past, and with determined effort go forth to the work of rebuilding their shattered fortunes. Their efforts have attracted strangers from other places to the advantages of that section, and now for several years there has been a combination of Southern, Northern and European enterprise and wealth working for private gain, but necessarily resulting in a general advancement of the entire South.

As railroads are the best exponent of a country's material progress, the expenditure during the past four years of not less than \$300 million in building new roads and improving old ones, gives some insight into what the South is doing. Since Jan. 1st, 1879, over 8,000 miles of new track have been laid in the South, which, at a moderate average cost of \$25,000 per mile for the road in running order, would represent an outlay of \$200 million; and then, when we add to this the immense sums spent in the improvement of old roads with new rails, new rolling stock, it can readily be seen that \$300 million is rather under than above the total amount expended on railroads.

While this marvelous progress has been going on in railroad circles, other industrial interests have advanced with probably equally as great rapidity. Manufacturing establishments of all kinds have gone up all through the South; new furnaces of great capacity have been erected, so that pig iron making is taking a very prominent position; coal and iron ore mines have been opened, and are now being worked with great success; saw mills are heard throughout the vast forests where nature reigned supreme only a few years ago. In fact we now see a rare combination of all things in action that combine to help on the material and social progress of a country and its people. The most ardent friend of the South could hardly ask for a more glorious future than that to which she is now so rapidly hastening, for what has been accomplished during the past

five or six years is but as the dawning of the day to the splendor of the midday sun.

### Work and Capital

The *Chicago Tribune* says that what the South needs is more work rather than more capital. The *Tribune* doesn't understand the situation in the South, and is not, therefore, qualified to speak. The white people of the South are workers. The condition of the South now, in comparison with what it was immediately after the war, proves that the Southern people have not been idle, and that they are not thriftless. The great cotton crops are not made by negro labor. Negroes help to rake them, but it is doubtful if they make one-fourth of them. There was a time when the annual crop was only a little more than half as large as it is now, and the negroes made about all of it. Negro labor, however, can no longer be relied upon. The negroes prefer the towns to the plantations, and avoid the cotton fields whenever they can.

The Southern people want Northern Capitalists to build cotton mills and factories of one kind and another, and to open mines. They themselves are too poor to do this. What little money they have is employed in the business which furnishes them a living. In time, however, they will have surplus capital, and then they will not suggest to Northern capitalists the opportunities which the South presents for profitable investments...

The South is doing as much work as any other section of the country. The animus of the *Tribune's* article is not easy to understand.

### Manufacturing

The Rome, Ga., Cotton Factory will in a few days receive a shipment of new machinery, which will give it 3,800 spindles, with a capacity of 2,200 pounds per day. Eight bag looms are now being put in to manufacture seamless bags. After this month the electric light will be used. The factory has orders ahead from Eastern cities for all its productions.

Subscription books have been opened in Louisville for raising the capital to establish a 15,000-spindle cotton mill. The prospect is reported favorable.

Arrangements are being made for erecting a large steam mill in Winterville, near Athens, Ga.

The Wasson Car Works of Chattanooga, Tenn., are building 100 dump cars for the Alabama Great Southern Railroad. They are crowded with work.

The building for the cotton mill at Henderson, Ky., is to be under roof before the winter fairly sets in. Two Corliss engines are being constructed in Milwaukee for use in this mill, at a cost of \$24,000.

The Cambria Iron Company has introduced nail machines into the Gautier Steel Department of their works, and propose to make steel nails.

Surveys are being made for a railroad from

Rising Fawn, Ga., on the Alabama Great Southern Road, northward to Coal City, about 18 miles. It is intended to give the coal mines about Coal City a new outlet southward.

Messrs. Cramp & Sons, of Philadelphia, have lately contracted to build three iron steamships for the Morgan line, running between New Orleans and New York. These boats will have a capacity of 9,000 bales of cotton each, and in the aggregate will cost \$1,050,000.

A copper mine is being operated near Dallas, Paulding county, Ga., and the ore taken out is said to be good.

A valuable deposit of gold has been found near Macon, Ga.

Birmingham, Alabama, has 10,848 population.

The Fall River Spool and Bobbin Company is completing a large order for the Shanghai Cotton Mill, China.

A permanent exposition will be established at Birmingham, Ala., for the display of Alabama's mineral resources.

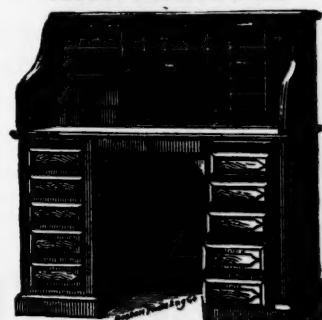
A spoke and buggy wood-work factory will probably be established at Union City, Tenn., very shortly.

Mr. Henry Fuller, of Autenville, Cheatham county, Tenn., will very soon erect a saw-mill near that place.

The Abendroth & Root Manufacturing Co., of New York, are about to enlarge their works at Greenpoint, the present facilities being inadequate to supply the demand for spiral riveted pipe and water tube boilers.

## Derby Roll Top Desks.

—Best Office Desk in the World.—



Cherry, Walnut, Oak, Ash and Mahogany.

Send for Illustrated Catalogue.

Geo. H. Derby & Co.

55 Charlestown St., Boston, Mass.



# LET'S GET DOWN TO CASES



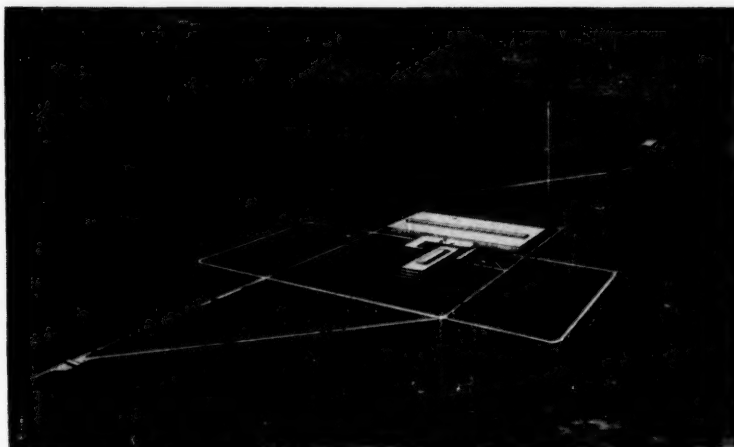
Give your LCL a "lift!" If it's going to, from or within the South and you want dependable, keep-it-moving service, call on . . .



## SOUTHERN RAILWAY SYSTEM

WASHINGTON, D. C.

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This is an artist's conception of the multi-million-dollar aircraft engine facility Pratt & Whitney Aircraft will shortly begin building in Palm Beach County, Florida. The two-story building in the center of the photograph will serve as the administration and engineering headquarters. The manufacturing building is the larger, single-story structure to the immediate rear of the administration building.

## Pratt And Whitney Picks Palm Beach For Multi-Million Dollar Jet Facility

PALM BEACH. Arrangements are practically completed to enable the Pratt & Whitney Aircraft division of United Aircraft Corporation to locate an auxiliary aircraft engine facility in Palm Beach County, Florida.

Governor LeRoy Collins and other Florida officials have signed an agreement with Pratt & Whitney Aircraft designating about 7,000 acres of land upon which the engine plant and development center will be constructed. The acreage is a part of the vast J. W. Corbett Wildlife Management area, a state game preserve, just east of Lake Okeechobee.

In exchange for the plant site, Pratt & Whitney Aircraft will give 9,000 acres of land on the south border of the Corbett game preserve to Florida for the enlargement of the Corbett preserve.

Wright A. Parkins, general manager of Pratt & Whitney Aircraft, said that only minor details now remain and that actual construction of the engine center will begin as soon as an access road now under construction is completed by Palm Beach County.

Mr. Parkins emphasized that the facility will be an auxiliary to the main

engineering and manufacturing laboratories and plants of Pratt & Whitney Aircraft in Connecticut. One of the major factors in selecting the Florida auxiliary site, he added, is the fact that it is isolated enough to permit test and development of highly advanced and extremely powerful jet engines. The year-round mild climate and the isolation, Mr. Parkins added, would allow the construction of testing and development facilities that are not encumbered by the tremendously costly acoustical material now necessary in test laboratories in populated areas.

With William P. Gwinn, president of United, Mr. Parkins began studying the eastern half of the nation a year ago in the search for a location that would provide adequate room and simultaneously be attractive to the engineering and technical personnel necessary to man an auxiliary jet facility. The division's Connecticut facilities, now comprising more than 7,000,000 square feet of floor space and manned by more than 37,000 employees, are approaching the saturation point, and the advanced engines of the next aircraft generation can be more safely and comfortably brought through in

a relatively remote, uninhabited area such as the site now chosen, Mr. Parkins said.

Governor Collins gave the two aircraft officers the full cooperation of the Florida Development Commission and other state agencies in the search for a site. After consideration of numerous areas, Mr. Gwinn and Mr. Parkins found that one in Palm Beach County met their requirements. The history of Pratt & Whitney Aircraft in successfully controlling water-source pollution and air contamination was reviewed by the Florida Wildlife Preserve authorities and found satisfactory. The game preserve authorities pointed out in turn that jet engine sounds, from Florida's extensive experience with many jet aircraft bases, including the Air Force's Eglin Field, apparently are quickly accepted by wildlife and thus would be of no concern.

Mr. Parkins said that United Aircraft will finance the cost of construction of the multi-million-dollar facility. He did not disclose the dimensions of the plant and its laboratories but said that approximately 2,000 engineers, scientists, and technical personnel in the jet engine design, test, and development program as now conceived would be required, and "several thousand" production workers when engine manufacture is begun. Company surveys indicated that many engineers and technicians now unwilling to work in the northern states, he said, would join the company if it had a Florida auxiliary.

The necessary enabling legislation for the exchange of lands by Florida and Pratt & Whitney Aircraft was enacted at the recent extraordinary session of the Florida State Legislature.

## Du Pont To Build Virginia Nylon Unit

RICHMOND, VA. A new nylon plant designed to produce 40 million pounds of fiber annually to meet the growing demand for its use in tire cord and other industrial products will be built by the Du Pont Company here.

The multi-million dollar project will be erected on the site with the company's rayon plant and will be in addition to the large existing plant for production of rayon yarns there. The company said:

"The decision to build our fourth nylon plant reflects our confidence that

nylon markets will continue to expand. We anticipate the most immediate growth will be in industrial yarns. The Richmond facility therefore has been designed to make heavy yarns for that market."

"The Richmond site was deliberately chosen in an effort to do everything possible to stabilize employment in the face of a lessened demand for rayon. It is a departure from the traditional practice of having only a single fiber produced at any one of our eight fiber-producing locations."

DuPont also manufactures cellophane at Richmond but this will mark the first time that two different textile fibers have been made at the same location.

Work is expected to begin sometime late this year and plant production is planned for the latter part of 1957. Approximately 800 construction workers will be required at the peak of activity. The rayon plant at present employs 2200 people.

Heavy denier, high tenacity nylon yarn, the type to be manufactured in Richmond, is also made by DuPont at its Seaford, Del., and Chattanooga, Tenn., plants. Those plants also make textile nylon which is the exclusive product at Martinsville, Va. Nylon staple is made at Seaford.

The great bulk of heavy denier, high tenacity yarns is used by the rubber industry in the manufacture of tires for automobiles, trucks, airplanes and buses as well as for heavy off-the-road equipment such as tractors and earth movers.

## IBM's Texas Plant Will Employ 150

SHERMAN, TEX. International Business Machines Corporation will construct a plant near here to manufacture punched cards. The plant will contain 56,000 square feet of floor space.

Company officials have stated that initial employment will be in the neighborhood of 150 workers by the end of 1957, and that an acceleration in employment will take place as soon as the plant hits its full stride.

The cards that are to be manufactured here are to be used for IBM electric accounting machines which range in size from comparatively small systems to so-called "giant brains."

"The rapid expansion of our business in Texas and the Southwest and the anticipated increase in the use of our machines throughout this fast-growing market makes it essential for us to provide card manufacturing facilities there in order to meet customer needs quickly and efficiently," a source close to IBM revealed.

Announcement of the location of the plant came after a long period of negotiation between local representatives, the Texas Power and Light Company industrial department, Todd and Draper Corporation, New York management consultants, and the IBM company.

## Ingalls Finishes 3-Year \$9-Million Expansion Plan

BIRMINGHAM. Completion of a three-year, \$9 million expansion program for the Ingalls Industries was announced here recently by Robert I. Ingalls, Jr., company Chairman of the Board.

In a report announcing the completion of the program, Ingalls said since 1953 to date, Ingalls Industries have booked well over \$350 million in sales. From an approximate dollar volume of \$62 million in 1953, the company has grown to a present average annual volume in excess of \$105 million. This constitutes a 70 per cent growth in the three-year period, the report showed.

In individual operations of the company, the Ingalls Shipbuilding Corporation, operating the shipyards at Pascagoula, Mississippi and Decatur, Alabama, has more than doubled its volume of orders in three years.

The Birmingham Tank Division also showed a very appreciable increase during this period.

Steel fabrication by the Ingalls Iron Works Company and erection by Ingalls Steel Erection Company as well as the Steel Warehouse Division, though stymied by third quarter steel shortages, are showing strong gains with a three-year booking of more than \$78 million.

To support and maintain this rate of growth, the Ingalls Industries entered into a continuing program of expansion for every division with an over-all expenditure during the last three years of more than \$9 million, Mr. Ingalls said.

All expenditures were made on a "pay-as-you-go basis," the report

pointed out, with no borrowed funds.

In setting forth the progress of the company, Mr. Ingalls paid tribute to "loyal, intelligent and effective cooperation of management staff and a corps of workmen of which I am very proud..."



Robert I. Ingalls, Jr.

"The abilities of these men have made possible the phenomenal three-year growth of this company," he added. "We have plowed back into the fertile field of our business to create better working conditions, more jobs, more buying power, and better service."

Mr. Ingalls lauded the opportunities of Southern industry, saying: "The land of opportunity is truly here in the South, and we shall continue to plan for an even greater tomorrow and the opportunity to serve the South and the nation as a whole."

Ingalls, an Alabama corporation, owned in Alabama, is the largest locally owned industry in the state.

Its products and services are sold throughout the United States and in many foreign countries. Ingalls builds both for private industry and the U. S. government in the fabrication and erection of steel for major structures and in the construction of ships, towboats and tanks of all sizes and types.

## Savannah Potash Survey

Port Wentworth Corp. (Savannah, Ga.) will make \$150,000 preliminary mining survey on nearly 2,000 acres of potash land it recently leased near Port Wentworth, Ga.

## Sheffield to Construct Steel Plant in Houston

HOUSTON. An expansion project that will make Houston the chief source of high strength alloy steel in the Central United States was announced here by officials of Sheffield Steel, a division of Armco Steel Corporation.

Construction of a large heat treating plant at the Sheffield mill on the Ship Channel will begin in the near future. It will provide facilities for heat treating, tempering, normalizing and annealing special alloy steel bars and plates.

The new project is the second major step authorized by the Armco Board of Directors in the last seven months "to meet the steel needs of the Southwest's expanding economy," Sheffield officials pointed out.

Late last year Sheffield announced plant enlargements and additions which will increase the ingot capacity of the Houston plant from 1,000,000 to 1,250,000 tons a year. These involve enlargement of the blast furnace, construction of a second electric furnace and building of facilities for blending and processing ores and coking coal. Work on these facilities is under way.

The new heat treating plant will not add additional capacity but will make the Houston plant one of the steel industry's important sources of specialized steels which are finding more and more industrial applications, Sheffield officials said.

Special steels are used in large quantities by the oil, aircraft and other Southwestern industries. Principal products made from heat-treated bars in this area are oil well drill collars and stud bolts, the latter used chiefly in oil field equipment, refineries and chemical plants. Aircraft quality plates and heat-treated commercial plates are used for various purposes by aircraft manufacturers and by other metal fabricators, principally for tanks built to withstand high pressures.

Sheffield officials pointed out that steel for these purposes formerly was shipped in from distant mills in the East. Fabricators will now have a near-at-hand, dependable source of supply, they pointed out. This is particularly important, they explained, during a period of steel scarcity such as has existed for several years.

## LATE NEWS HIGHLIGHTS

FORREST CITY, ARKANSAS. Yale & Towne Manufacturing Co. is building a \$4 million factory here to produce a major line of the company's materials handling equipment. The new plant is scheduled to employ around 400 persons, and will serve as Yale's mid-continent plant. This is the firm's fifteenth plant.

TAMPA. Joseph Schlitz Brewing Company has announced plans for immediate construction of a \$20 million brewing plant here to supply Latin America and the southeastern section of the United States. A 55 acre site has been purchased. Annual beer production in the Tampa plant is expected to be 1 million barrels. Initial employment of 500 to 750 will increase to 1,000 as full production is reached.

FAYETTEVILLE, ARKANSAS. A new million-dollar plant of the Standard Register Company of Dayton, Ohio will be built here. Construction of the first phase of the plant, containing approximately 64,000 square feet of floor space, is expected to be completed by mid-1957. As equipment becomes available the size of the building will be expanded to 120,000 square feet. At full capacity, the plant will employ 350 workers.

HOUSTON, TEXAS. Armco Steel Corporation announced that it has made application to the Federal government for a certificate of necessity covering a proposed \$118 million expansion program at the Houston works of the company's Sheffield division.

SHREVEPORT. Texas Eastern Transmission Corporation received Federal Power Commission authorization for an \$82.7 million expansion project involving the importation of substantial quantities of natural gas from Mexico.

BOYLES, ALABAMA. Construction of a new \$8.5 million modern freight yard here has been authorized by the Louisville and Nashville Railroad and work has now begun. It is to be located three and a half miles north of Birmingham, and will be able to handle a peak load of 4,200 cars per day.

COCOA, FLORIDA. McGregor Smith, chairman of the board of Florida Power and Light Company, announced that a multi-million dollar electric plant will be built in either Volusia or Seminole County, Florida. Also, to keep up with the tremendous growth in the area surrounding the guided missile base near Cocoa, Florida's first 240,000 volt transmission line will be built to connect the present plant on Lake Monroe at Sanford, Florida, with the South Florida operations. The cost of both projects will be in excess of \$20 million.

ATLANTA. The Air Force is planning to spend \$60 million this fiscal year on construction projects at its guided missile bases in the Southeast, according to L. B. McCloud, deputy chief of the construction division of the Air Force.

NORFOLK, VA. The Seaboard Air Line Railroad will place an order for 2,400 freight cars which will cost about \$20 million. The order will consist of 700 open-top hopper cars, 900 gondolas, 300 pulpwood cars and 500 cement cars.

LOUISVILLE. Construction is under way on a \$3 million addition to American Synthetic Rubber Company's plant here. The addition will increase existing facilities at the existing plant by 50 percent. Completion is set for January, 1957.

ROANOKE, VA. The Accessories Division of Thompson Products is building a \$10 million missile and rocket facility 17 miles South of here in Franklin County. The company has bought a 1,000 acre site with construction slated to begin next year. The plant will be composed of 14 buildings and will employ 500 people by 1960.



It was also pointed out that the triangle formed by lines drawn through Dallas, Fort Worth and Wichita, Kan., is now the second largest producer of aircraft in the United States, and it is growing constantly in importance as the government encourages decentralization of the huge aircraft manufacturing concentrations on the Pacific Coast.

"These aircraft industries will use an increasing amount of high quality alloy plates," the Sheffield officials said, "and it will be important to them and to national defense to have a source of supply that is close to home and less vulnerable to enemy attack than some existing sources."

Sheffield decided to go ahead with development of production facilities for the high quality alloys at Houston after three years of research and development work in a small pilot plant which has been producing the specialized steels since 1954.

"These pilot operations have been highly successful," a Sheffield official declared. "We have produced steels to meet the most rigid specifications, and in the process have trained the highly skilled technicians and workmen needed to operate such a plant. The new plant will enable us to greatly increase the output of these special alloys and to supply about 95 per cent of the types which are used in the Southwest."

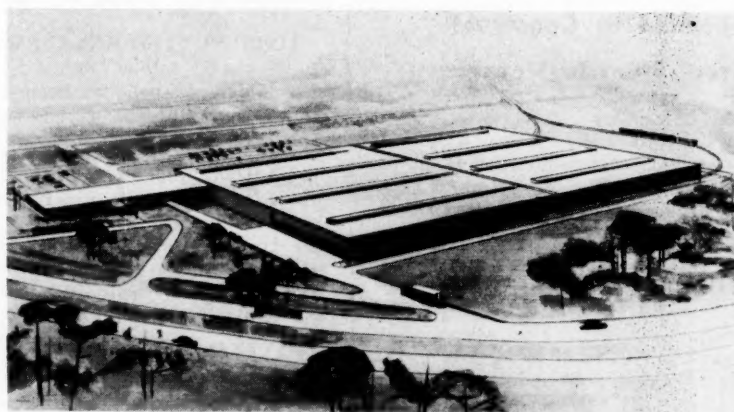
The heat treating facilities will be housed in a new building 450 feet long and 100 feet wide, with 45,000 square feet, or slightly more than an acre of floor space. It will have a steel framework and sheet steel siding.

The new plant, designed by Sheffield engineers and metallurgists, will be the most modern of its kind in the Central United States. It will provide facilities for heat-treating, quenching and tempering bars in one straight-line operation, as well as facilities for normalizing plates and annealing both bars and plates.

In addition to providing the strict temperature controls that are vital in the heat-treating process, the plant will be operated throughout under 100 per cent atmosphere control to prevent scaling and decarburization.

Sheffield steel has been an increasingly prominent factor in production of hot rolled alloy steels since 1946, supplying these steels principally to the oil tool industry.

The new facilities will add to its specialized alloy line heat-treating rounds, bars and plates.



Major Supply Depot to be built by Chevrolet Motor Division on an 82-acre site northeast of Atlanta. The 280,000 square foot warehouse, which will be built at Peachtree Industrial Boulevard and Old Peachtree Road, will stock approximately 20,000 different auto and truck parts and accessories.

## Chevrolet Buys 82-Acre Atlanta Site For 280,000 Square Foot Supply Depot

ATLANTA. Chevrolet Motor Division has announced acquisition of an 82-acre site northeast of here for a new 280,000 square foot Major Supply Depot. Work on the project is scheduled to begin late this year.

The Chevrolet-Atlanta Major Supply Depot will be at Peachtree Industrial Boulevard and Old Peachtree Road at Doraville. The site was purchased by Chevrolet from Buick-Oldsmobile-Pontiac Assembly Division of General Motors, which operates an auto assembly plant adjacent to the supply depot site.

The functionally designed, single story warehouse will be of steel frame construction with brick and aluminum siding. It will include 252,500 square feet of warehousing area and 27,500 square feet of office space.

Novel in the design of the building is the provision for a road underpass 110 feet long under the office portion of the warehouse. The 1,200 foot long access road between Peachtree Industrial Boulevard and Old Peachtree Road will be used primarily by trucks servicing the warehouse.

The most modern material handling equipment will be used in the supply depot to provide fast, efficient flow of thousands of parts into and out of the warehouse. Approximately 20,000 different auto and truck parts and accessories will be stocked at the new depot.

For instance, a unique tow conveyor system 3,240 feet long will be built

into the warehouse floor to enable the unattended movement of parts laden tow trucks to various stations within the structure. Electrical controls will route the tow trucks to their appointed destinations.

Two railroad spur lines will enter the warehouse at the rear. There will be space for the unloading under roof of seven rail cars and space for loading three rail cars with outgoing parts.

Facilities will be provided for under roof loading of up to 14 large trucks and for unloading of four big trucks.

## Kaiser Lets Contract For Acid Pilot Plant

NICHOLAS, FLA. Kaiser Aluminum & Chemical Corporation has announced award of the contract for construction of a pilot acid neutralizing plant at Nichols, Florida, to the Wellman Construction and Engineering Company of Lakeland, Florida. The contract amounts to approximately \$400,000.

The plant, which is expected to be completed by early 1957, will neutralize waste acid from the phosphate industry, producing a salt for use in the corporation's chemical operations. Initial employment will total from 10 to 15 persons.

A 40-acre site for the plant has been purchased from the Virginia-Carolina Chemical Corporation.



## EXPANSION

### Southern Chemical Firm Launches Ohio Branch

ATLANTA. Zep Manufacturing Corporation here is opening a North Central Division at Cleveland, Ohio. The new building was ready in October.

Erwin Zaban, Executive Vice-President, said the new quarters all on one level, will provide adequate space for the new expansion and will be equipped with the latest of office and warehousing equipment. The North Central Division will be headed by H. Wm. Swann and will handle the distribution of Zep Products throughout the states of Indiana, Ohio, Michigan, West Virginia, Pennsylvania, New York and Maryland.

The new plant is a complete unit in itself. Zep also operates the same type of facilities at Dallas, Texas for service to its customers in the southwestern states, at Kansas City, Missouri for service to its customers in the mid-western states, and at Atlanta, for service to its customers throughout the southeastern states.

Zep also recently announced the construction of a Manufacturing Unit to include research and development laboratories in the Chattahoochee Industrial District of Atlanta.

Zep Manufacturing Corporation, an Atlanta born firm now recognized as one of the largest manufacturers of industrial sanitation and maintenance products in this country, will celebrate its 20th birthday at the end of this year.

### Martin Buys 6,400 Acres For Orlando Plant

ORLANDO, FLA. The Glenn L. Martin Company announced recently that it has purchased a 10-square mile site on the outskirts of this city. Cost for the 6,400-acre tract is well over \$1 million.

George M. Bunker, president and chairman of the board, said the new location is required to execute Martin's commitments in the new fields of electronics, nucleonics and missiles as well as in the field of piloted aircraft.

Bunker said that the company already employs more than 26,000 people at its Baltimore and Denver plants in designing and building complicated modern weapons systems for all three military services. These products—together with several that have not yet been announced—include:

(a) For the Air Force: the inter-continental ballistic missile, Titan, the

## SOMETHING NEW HAS BEEN ADDED TO THE "COFFEE KLATCH"

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TM-61 Matador tactical missile, the B-57 twin-jet light bomber and a recently announced, advanced-type tactical bomber;

(b) For the Navy: the P5M-2 Marlin anti-submarine patrol plane and the new P6M SeaMaster four-jet, mine-laying and reconnaissance seaplane for which a production contract was let last month; and

(c) For the Army: an electronic system, known as the Missile Master, for controlling and coordinating anti-aircraft missile batteries.

In addition, the Martin Company has a prime contract with the Navy to design, build and launch the multiple-stage rocket, Vanguard, which is scheduled to place the first man-made satellite in an orbit about the earth during the International Geophysical Year, ending December 31, 1958.

Dozens of smaller sub-contractor factories are expected to move into the area, giving Florida an industrial heartland which may some day become the backbone of the state's economy. Thousands of skilled workers will be required to man the new industry. They will boost Orlando's population to near staggering proportions in the next few years.

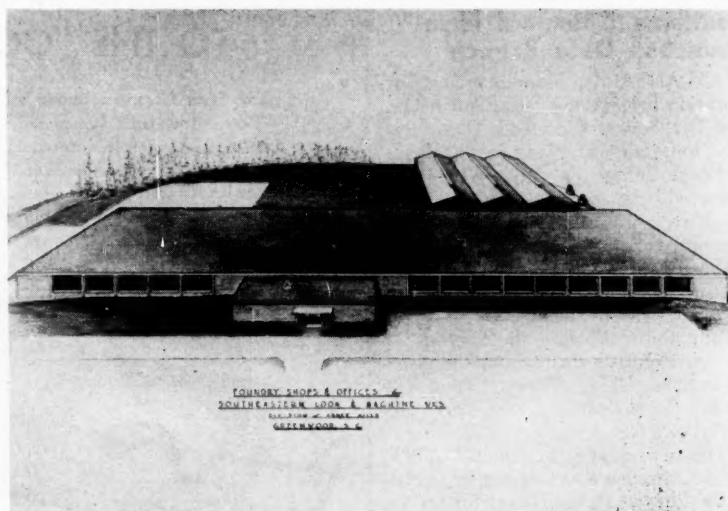
Martin's activities in Florida already include preparations for the testing and launching of Vanguard from Patrick Air Force Base, the Air Force's Missile Test Center east of Orlando. The company also has, for several years, participated in the development, testing and practice firing at Patrick and continues to render technical assistance to the Air Research and Development Command's 6555th Guided Missile Squadron now training with Matadors at the Orlando Air Force Base.

## Memphis Excavating For \$130 Million Steam Plant

MEMPHIS. Excavation work is underway for the new \$130 million 750,000 kilowatt steam plant for the Memphis Light, Gas & Water Division, which is to be completed in 1958.

Building of the plant by the city is an outgrowth of the hot Dixon-Yates fight, which blocked the privately owned steam plant planned in West Memphis.

The Memphis plant, when built, is expected to have a tie-in with the Tennessee Valley Authority.



Artist's conception of Southeastern Loom and Machine Works' proposed facility in Greenwood, South Carolina.

## Southeastern Loom and Machine Works Relocating Plant in Greenwood, S. C.

GREENWOOD, S. C. Southeastern Loom and Machine Works, a division of Abney Mills, is building a new, modern, one-story plant in Greenwood.

Work has begun on the new building and the move from Greenville will be completed by December 31, 1956. The Daniel Construction Company of Greenville is erecting the plant.

Southeastern employs 300 people and has an annual payroll of approximately \$1,000,000.

The new plant is located on West Alexander Avenue adjacent to the Georgia and Florida Railroad. The tract of land contains sufficient acreage to provide ample space for parking and future expansion. The buildings will contain approximately 138,000 square feet of floor space.

In a letter to Southeastern customers, Conway Still, president of Southeastern, said, "In this new plant will be installed the latest and most up-to-date equipment designed to improve our product and our service to you."

"Being fully cognizant of the unfair and extremely serious Japanese competition, we are devoting ourselves to improving textile machinery and being of as much assistance as possible to the textile industry in its effort to overcome the vast difference in Japanese and American wages. We feel that the answer lies to a great degree in improved machinery."

"We will keep you informed as to the progress of our new plant and we will make every effort to continue to serve your needs without interruption."

Mr. Still has assured the employees of Southeastern that the company will assist them in every way in making the move.

In an official announcement to employees, he said, in part, "To improve our operation and our service to our customers, we have decided to build a new, modern, one-story plant in Greenwood, S. C."

"We will assist you in every way in making this move and we have received pledges of cooperation from the various organizations in Greenwood to help you."

"All Southeastern and Abney Mills officials stand ready to assist you."

"We believe that you will like living in Greenwood and that this move will be consummated with a minimum of inconvenience to you. The Greenwood 'welcome mat' is out and we believe you will enjoy working in the new plant."

Southeastern Loom and Machine Works manufactures looms, loom parts, card and drawing coilers, spinning frame pulley spindle drives, centrifugal and gear size pumps, hydraulic presses, electro magnetic loom drives with electronic control, special machinery for the textile and paper industries.

The company acts as sales agents for the leading manufacturers of roving cans, loom bolts and nuts, leather, picker sticks, lays and hand rails, electric motors and switches, S & C hooks, springs, screws, bearings, oilite bushings, electrodes, lug straps, steel—all shapes and sizes.

### Armco Constructing Plant In Atlanta For \$500,000

ATLANTA. Construction has begun on a new \$500,000 Armco Drainage & Metal Products, Inc. steel fabricating plant here, S. R. Ives, president, announced recently.

Armco Drainage, a subsidiary of Armco Steel Corporation, manufactures a wide variety of steel products for agriculture and the construction industry.

The new Atlanta plant, Ives said, will produce gasoline and fuel oil bulk storage tanks, corrugated metal pipe and pipe-arch in a wide range of sizes, farm pond drainage pipe, and miscellaneous construction products. It will serve customers in Georgia, Alabama, Florida, North Carolina, and South Carolina, the states which make up the company's Dixie Division.

The plant will also have facilities for converting corrugated metal pipe to the company's new SMOOTH-FLO sewer pipe and for coating and paving pipe with asphalt. It is expected, Ives said, that facilities for manufacturing Armco prefabricated steel buildings will be added at some time in the future.

The new plant will also serve as a regional warehousing and distribution center for other products which Armco Drainage produces at other points. Stocks of Armco Multi-Plate, Helcor, and spiral welded pipe and Flex-Beam highway guardrail will be kept on hand, Ives said.

Production space at the new plant will total 60,000 square feet. It will be located on a 52-acre site three miles south of the College Park section of Atlanta.

The building will be of prefabricated steel construction, manufactured by Armco Drainage, and using the company's unique new wide-span design. A separate office building will include a locker room for 125 employees, first aid room, and the plant office. The site will be served by a railroad spur and will have parking and warehousing areas.



The sales staff of Connors Steel Division of H. K. Porter Company, Inc., gathered recently at the division's Birmingham offices and plant for a two-day sales meeting. Reading from left to right are: (1st row)—Gerbert McCorkle, Robert Duenner, David Gent, James Carroll, Charles Boisch and Richard Carthey. (2nd row)—C. J. White, Richard Silver, Dennis Donahue, William Califf, Jr., B. C. Blake, Vice President and General Manager. (Back row)—Raymond O'Hara, H. T. Montgomery, Shiers Jones, Ben Baswell and Tom McWilliams.



The 1956 Advertising Award of the Deep South District, Advertising Federation of America has been presented to The Southern Company, of Atlanta and Birmingham. Here Arthur E. Burdge, left, of Atlanta, immediate past governor of AFA district and chairman of its advertising award committee, congratulates T. Hunt Vaden, of Atlanta, Vice President of The Southern Company. The presentation was made at a meeting of the AFA group in Baton Rouge.



Ives said that the company's present plant at East Point, Georgia, also in the Atlanta area, will continue in operation until the new facilities have been completed—probably about January 1, 1957.

Warren S. Mann, vice president of Armco Drainage and manager of the Dixie Division, will direct operations at the new plant, as well as plants at Jacksonville, Florida, and Raleigh, North Carolina.

W. W. Wilkinson is production supervisor of the Dixie Division and J. A. Callway will be superintendent of the new Atlanta plant.

## \$50 Million Expansion Set For Maryland Pulp Mill

LUKE, MD. A major mill expansion program at Luke, Md., calling for the expenditure of some \$50,000,000 over the next few years, has been approved by the board of directors of West Virginia Pulp and Paper Company.

The largest ever undertaken by the company at one location, the program will transform Luke into one of the most modern and efficient mills in the country when completed.

Mill manager, John A. Luke said that he was particularly pleased that the company has elected to go ahead with the expansion program since it will enable the mill to meet the more intense competition faced by the industry. In effect, he said, the board's approval was a demonstration of faith in the mill personnel and the people of the community.

Present plans call for the installation of two new large paper machines, capable of running at maximum speeds of 2500 feet per minute, one producing coated and the other uncoated papers. These new machines, along with the expansion of the mill's other facilities, will ultimately boost Luke's production to more than 800 tons a day, or roughly double the present capacity.

Approval of the program by the company's board came shortly after the Maryland Water Pollution Control Commission acted favorably on the company's proposals to treat wastes with a modern treatment plant capable of handling effluent from the mill's current production as well as the added output from the new facilities. The plant, which is designed to actually improve the present condition of the river, will cost an estimated \$3,000,000,

or more than any other company in the industry has ever invested in a single waste abatement project.

Selection of Luke as the site for a major share of the company's expansion, was the result of years of study which indicated that the area had the basic essentials needed for long-term growth. These include adequate supplies of wood and water, skilled, dependable people interested in the community's progress, and a strategic location in relation to paper markets.

Mr. Luke said that an added consideration was the fact that the company had long felt that the communities in which it has operated for so many years should have the first opportunity to gain the economic benefits to be derived from expanded operations, whenever practicable.

He pointed out that although many difficult problems have still to be resolved, especially those having to do with engineering and construction and the hiring and training of new personnel, he felt that the mill could continue to maintain its high quality and high tonnage production during the period of building.

In addition to building a \$3,000,000 waste treatment plant, Mr. Luke indicated that he and management are very much aware of air pollution and will continue aggressive efforts to minimize it.

"We want to be proud of the community," he said, "and we want the community to be proud of us."

## Cyanamid To Enlarge Georgia Titanium Unit

SAVANNAH. American Cyanamid Company will expand production to 72,000 tons annually of Unitane titanium dioxide pigment at its plant here.

It has been estimated that the new facilities will be in operation by early 1958, and will require approximately 250 additional employees. The plant is located on a 1,600-acre tract along two miles of riverfront.

Unitane supplies the whiteness to many different products such as paints, hard-surface floor coverings, enameled kitchen appliances, paper, white wall tires, and decorative finishes for cans and tubes.

Cyanamid's Unitane, first manufactured at Piney River, Virginia, was introduced to industry in 1938. Today both its Savannah and Piney River

plants are producing the pigment. Production began at Savannah with completion of the plant in July, last year.

## Gravely Tractors Building New Plant in Albany, Ga.

ALBANY, GA. The Gravely Tractor Company, Southern Region, Dunbar, West Virginia, will construct a 30,000 square foot plant on a five-acre tract here immediately.

The initial employment in the plant will be 50 men, and may be increased as much as 200 according to A. C. Gortatowsky, chairman of the Industrial Development Committee of the Albany Chamber of Commerce.

The Albany plant will act as sales headquarters for all the South. It will completely assemble Gravely tractors and attachments and ship them to the territory served.

The new firm was acquired through a small classified advertisement placed by the Albany Chamber of Commerce almost one year ago in *Industrial Development*, published in Atlanta. (*Industrial Development* is MANUFACTURERS RECORD's sister publication.)

## Price Brothers Complete Hattiesburg Concrete Plant

HATTIESBURG, MISS. A new \$1 million concrete pressure pipe plant was scheduled for completion here during October according to officials of Price Brothers Company of Dayton, Ohio.

Ground was broken in July for the plant which will manufacture pipe in diameters from 16" to 54" and larger.

Price Brothers already has plants in Dayton, Cleveland and Columbus, Ohio, Detroit, Michigan and in Miami, Florida.

The Hattiesburg plant is located on a 20-acre site adjacent to the Bonhomie & Hattiesburg Southern railroad. Land for the project was purchased from the railroad. The new plant will employ about 100 local persons.

Price Brothers officials considered several other locations before they settled on the site here. They said they were looking for a centralized location from which to serve the growing needs of the rapidly industrializing deep South.

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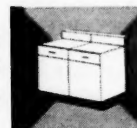
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## PROGRESS NOTES

**PLYMOUTH, N. C.** A new plant for liquid alum production was opened recently here by American Cyanamid Company. Construction began in March, and the first alum shipment made in late July. The plant is now operating at scheduled production to service the paper mills in the North Carolina-Virginia area.

**PERRY, FLA.** The Buckeye Cellulose Corporation announces that it has purchased 20,735 acres here. P. K. Honey, Buckeye vice president, said the new acreage adjoins present company property and brings Buckeye's holdings in Northwest Florida to about 780,000 acres. In March, Buckeye announced expansion plans which will double production of cellulose pulp at its Foley Mill. Construction of new facilities originally slated to begin this month are expected to start in the spring of '57.

**BATON ROUGE.** The Crown Zellerbach Corporation of San Francisco has filed six-month options on 1,900 acres of industrial property fronting on the Mississippi River 20 miles north of here. The company is investigating a number of sites as part of its long range plans to expand its operations in the lower Mississippi River area.

**SAVANNAH.** Building more warehouse space on industrial property adjacent to the state's Savannah docks is the latest expansion plan under study by the Georgia State Ports Authority. R. E. Frankenfield of Savannah, chairman, said this was discussed at a meeting recently. The Authority announced it would offer only \$1 for the Central of Georgia Railroad's Savannah port facilities. The authority holds 150 acres of land suitable for industrial development adjacent to its docks.

**KNOXVILLE.** The Tennessee Valley Authority announces it will build three additional steam plant units at a total estimated cost of \$74 million to be paid for from its power earnings. Two of the new units will be at the Johnsonville Steam Plant and one at Gallatin, Tennessee. These three units are in addition to four others TVA announced early in the summer it would build from power earnings. Total cost of all seven units to be financed from TVA's earnings is estimated at \$184 million.

**CHARLOTTE, N. C.** Ronson Corporation has recently opened an aircraft parts plant in Charlotte. It was constructed on a three-and-a-half acre site at a cost of \$200,000 for building and land. Operations include design, manufacture and testing of hydraulic valves and cylinder assemblies for the aircraft and missile industries.

**EAST POINT, GA.** The Borden Company will soon build a new combination refrigerated biscuit plant and cheese warehouse here. The new plant will consolidate the present Borden biscuit plant with its cheese warehouse.

**LONGVIEW, TEXAS.** A new manufacturing plant of LeBus International Engineers will be built here in the near future. The new plant will be designed especially for the manufacture of a group of products which includes the world-famed LeBus wire line spooling system, telescope drill points, fishing tools and other specialized oil field tools.

**JACKSONVILLE.** Plans for construction of an earth-filled marginal wharf at National Container Corporation's Jacksonville kraft pulp and paperboard mill were announced recently. The marginal wharf, fronting the St. John's River, will be 600 feet long. The company has acquired nearly 100 acres of land adjacent to the plant and recently disclosed that it is considering further expansion of mill operations.

**KNOXVILLE.** The Volunteer Portland Cement Company revealed plans for \$3 to \$4 million expansion of its Knoxville plant. The Company will begin immediate construction of an addition which will increase its present capacity by 40 percent.

**NEWPORT, TENN.** A new furniture plant will be erected in this area by Heywood-Wakefield Company of Gardner, Mass. A company official said the firm will manufacture "some of its school line and a complete new line of upholstered furniture" at the plant. Several hundred persons will be employed.

**MEMPHIS.** The Carter Division of the Fruehauf Company is in the process of doubling the size of its Memphis trailer plant. When the expansion is completed it will permit an increase in employment by 800 to 1,000 men.

**FORREST CITY, ARK.** Yale & Towne Manufacturing Co. of Sanford, Conn., will build a \$4 million plant here, which will employ 400 persons. The company plans an ultra modern plant where a "major line" of the company's material handling equipment will be made. The Company manufactures fork lift trucks and electric hoists.

**BEAUMONT, TEX.** The completion of a \$2-million building and expansion program at ALCO Product's plant here has been announced by company officials. The remodeled plant will boost production of heat exchangers and oil field equipment. ALCO now has one of the most modern and efficient plants in the oil industry to manufacture specialty items and to mass produce heat exchangers and well-control equipment. Repair facilities also are provided as are large warehouse areas to stock both products turned out in Beaumont and those from other ALCO plants.



"Perhaps it hasn't been made entirely clear to you, Chip. The Company has no on-the-job pension program."

## New Plant Summary

The following is a summary of major industrial plants reported to the RECORD during the month of September, 1956. This information has been checked with the Southern Association of Science and Industry and various state development agencies.

Number of employees is indicated by the code: A (under 25); B (25-100); C (100-250); D (250-1000); and E (over 1000).

## ALABAMA

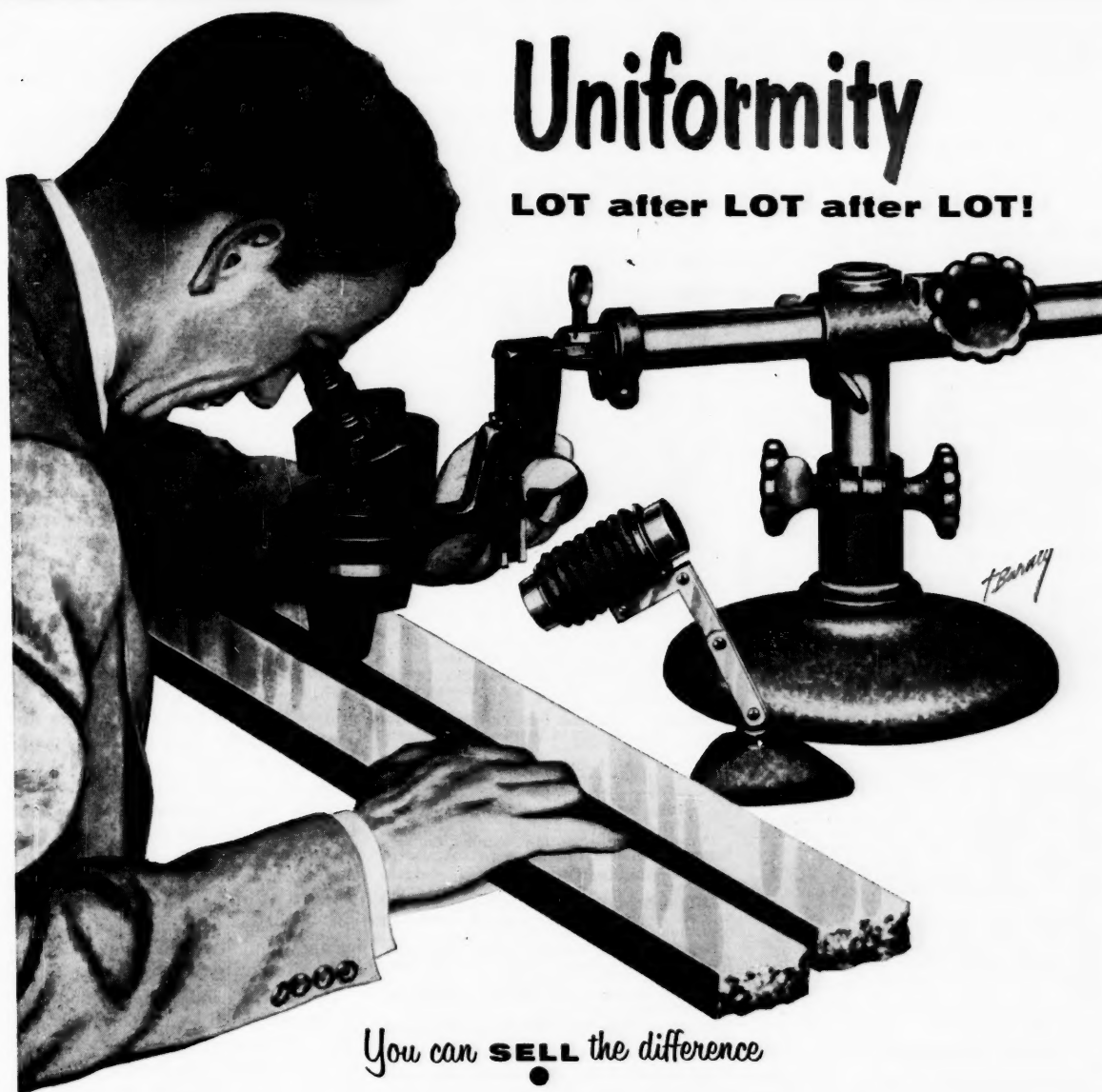
Hartselle—Julius Kayser Company (500 Fifth Ave., New York), apparel. (B)  
Headland—Dothan Oil Mill Co. (Dothan, Ala.), Quinn Laseter, Plant Supt., peanut shelling. In operation. (B)  
Homewood—Dixie Controller Co., Ellis M. Duncan, switchboards.  
Wedowee—Wedowee Manufacturing Co., sport shirts.

## ARKANSAS

Conway—Twin Tables Manufacturing Co., furniture. (B)  
Dardanelle—Bell Handle Co., W. A. and W. E. Bell, owners, wooden handles. (B)  
Forrest City—Yale and Towne Co., hoists, hand trucks, hardware. (D)  
Hot Springs—Dryden Pottery Co., ceramics. (B)  
Magnolia—Magnolia Wood Products Co., staves, containers.  
Malvern—Crossett Lumber Co., pulpwood yard. (C)  
Nashville—American Colloid (Chicago 54), barite. \$500,000.  
Russellville—Ark-Val Hatchery, broiler chicks.  
Walnut Ridge—Midway Trailer Corp., Walnut Ridge Airbase, house trailers. (C).

## FLORIDA

Cocoa—A.C. Spark Plug Division (General Motors Corp.), missile research. In operation September, 1956. (B)  
Ft. Lauderdale—Flamingo Food Corp., preparation of fresh fruits and salads. In operation October, 1956. (B)  
Fort Pierce—Seminole Oil Co., refined petroleum. Operation est. to begin Fall, 1956. \$16 million.  
Graceville—Williams-Barker Syrup Co., syrup. Under construction. (B)  
Howey-in-the-Hills—Libby, McNeil and Libby, citrus concentrate. \$4½ million. (D)  
Jacksonville—Simmons Co. (Chicago), J. W. Walker, Plant Mgr., mattresses, box springs. \$2 million. (B)  
Melbourne—Missileonics, instrumentation research and development. In operation September, 1956. (B)  
Miami—National Novelties, fabrics and millinery. In operation September, 1956. (B)  
North Miami—Tremm Chemical Corp., George W. Kates, Board Chairman, chemicals. In operation October, 1956.  
St. Petersburg—Air Associates, Inc., John Godsey, Pres., electronics for defense. \$2 million. (D)  
St. Petersburg—Circuit Instruments, Inc. (Subs. International Resistance Co.), electronics. In operation September, 1956. (C)  
Sarasota—Fenne Boat Corp., small boats. In operation September, 1956. (B)  
Sarasota—Ritz Craft Mobile Home Co. (Argos, Indiana), Wayne Wright, Plant Mgr., house trailers. Completion est. December, 1956. (B).



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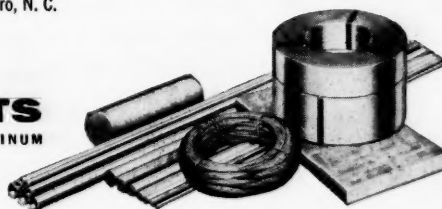
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## RESEARCH AND DEVELOPMENT

Tampa—Joseph Schlitz Brewing Co. (Milwaukee), beer. Completion est. 1958. \$20 million. (D).

### GEORGIA

Americus—Mott Body Works, Inc., Rucker St., truck bodies, refrigerated units (B).

Brunswick—Tom Sawyer Paints, Inc., paints, varnishes. In operation September, 1956.

Cave Spring—Harmon Sportswear Co., George Heimbach, General Mgr., men's clothing. (C).

Flowers Branch—Cooperative Mills, Inc. (Cotton Producers Assoc., Cincinnati), feeds. Lavonia—Romy, Inc., children's clothing. In operation October, 1956.

Montezuma—Montezuma Athletic Numbering and Lettering Co., J. W. Matt, Pres., letters, monograms, emblems.

Newman—International Latex Corp. (Playtex Park, Dover, Dela.). In operation August, 1956.

Rochelle—Madison Shirt Co. In operation. Swainsboro—Elroy Turpentine Co., Herman Kennedy, Mgr., naval stores.

### KENTUCKY

Frankfort—Sessions Engineering Co. \$1 million. (C).

Henderson—Spencer Chemical Co., nylon moulding resins. \$5 million.

Mexico—Pennsylvania Salt Mfg. Co. (Philadelphia), fluorspar. In operation 1956.

### LOUISIANA

Baton Rouge—Crown Zellerbach Corp. (San Francisco) has optioned land for a plant 20 miles north.

Baton Rouge—E. I. Du Pont de Nemours & Co. (Wilmington, Delaware) has optioned land for a plant in Industrial Canal Area.

Bossier City—P & H Tube Mill, 411 Hamilton Road, Roy Parker, Pres., pipes and tubing. In operation September, 1956. \$400,000. (B).

Bossier Parish—Tex-Crete Co., John Porter, Gen. Mgr. (Box 552, Shreveport, La.), pre-cast beams \$450,000. (B).

Sarapata—SunRay Mid-Continent Oil Co. (Tulsa 2, Okla.) natural gasoline. In operation.

### MARYLAND

Baltimore—Marienn Products Co., Inc., Milford Mill Road, Martin Caplan, Pres., automotive accessories.

Sparrows Point—Glidden Co. (Cleveland 14, Ohio), titanium dioxide. In operation. \$8 million.

### NORTH CAROLINA

Asheville—Hicks Corp., electrical equipment. (D).

Burlington—Cerlist Diesel Corp., diesel engines. Operation est. to begin early 1957. (C).

Dobson—Caroline Poultry Farms, foods. (C).

Gastonia—Homelite Division of Textron (Port Chester, N. Y.), chainsaws. (D).

Lenoir—Jiffy Manufacturing Co., furniture packing pads. (B).

Lumberton—Carolina Canning Co., foods. (B).

Sanford—Dixie Wood Products Co. (B).

### OKLAHOMA

Cushing—Midland Coop, reformed petroleum. In operation. \$650,000.

Lindsay—Phillips Petroleum (Bartlesville, Okla.), natural gasoline. In operation.

Tulsa—Brin Chemical, phenol, xylene, cresylic acids. In operation.

### SOUTH CAROLINA

Calhoun Falls—Mead Corp. (Dayton 2, Ohio) have bought plant site.

### TENNESSEE

Bethpage—Barmac Boat Co., house boats. Lawrenceburg—National Carbon Co., carbon products (C).

Memphis—J & J Mfg. Co., T. E. Jackson, Pres., grease guns.

Morristown—American Enka Corp. (Enka, N. C.), rayon staple fibers. Operation est. to begin late 1956. \$21 million.

Newport—Heywood-Wakefield Co., furniture. (B).

Newport—National Cylinder Gas Co., chemicals. (B).

Paris—Stylecraft of Paris, boats.

South Pittsburg—Pittsburg Knitting Mills, Harold S. Smith, Pres., infants' socks.

### TEXAS

Abilene—Borden Co. (350 Madison Ave., New York), milk processing. \$530,000.

Cameron—Walled Lake Door Co., George Tuinif, Pres., wooden doors. In operation 1956. \$150-200,000.

Carthage—Arkansas Fuel Oil Co. (Shreveport 4, La.), reformed petroleum. In operation.

Cisco—Cisco Fabrics, Inc., Highway 80, textiles. Under construction. (C).

Corpus Christi—Sunray Mid-Continent Oil Co. (Tulsa 2, Okla.), gasoline. Under construction.

Corpus Christi—Suntide Refining Co., reformed petroleum. In operation.

Crane—Phillips Petroleum Co., natural gasoline.

Dallas—Shea Chemical Co. (Baltimore), sodium phosphates, phosphoric acid. In operation October, 1956. \$1.5 million.

Denison—Johns-Manville Corp., Highway 75, A. R. Fisher, Pres., asbestos cement pipe. Under construction. \$10 million.

Eastern Texas—Northeast Texas Chemical Co., fertilizers. Planned.

Houston—Nifty Tablet Mfg. Co., 5803 Navigation. \$350,000.

Houston—Petrox-Tex Chemical Co., butadiene. Operation est. to begin late 1956.

Houston—Warren Petroleum Corp. (Tulsa, Okla.), petrochemicals. \$ multimillion.

Odessa—Texas Gulf Producing Co., natural gasoline. Under construction. \$1.2 million.

Point Comfort—Aluminum Co. of America (Pittsburgh 19), alumina. Under construction. \$45 million.

Tyler—East Texas Oxygen Co., R. A. Holmes, Manager, oxygen, acetylene, nitrogen.

### VIRGINIA

Bassett—Bassett Table Company. Montpelier—Metal and Themit Corp. (New York 17), titanium. Under construction. \$750,000.

Newport News—Dow Chemical Co., synthetic fibers. \$15 million. (D).

Stanleytown—Stanley Furniture Co., Inc., furniture.

### WEST VIRGINIA

Cresap—Pittsburgh Consolidation Coal Co. (Pittsburgh), coal carbonization, tar. Planned.

Nitro—Republic Steel Corporation, steel barrels. (B).

## Tennesseans Improve Ion Exchange Process

KNOXVILLE. The bottleneck of regular shutdowns which for years has plagued industries using the common ion exchange technique has been broken by a chemical engineering team at the University of Tennessee.

The technique, uses of which range from softening water to concentrating uranium, is widely employed in chemical and allied industries.

Professor Fred N. Peebles of the chemical engineering staff heads the U-T research team which has developed an entirely new form of equipment for this process. The group did the work under a \$20,000 contract, just renewed for a second year, with Union Carbide Nuclear Co., a prime contractor for the Atomic Energy Commission.

As explained by Peebles, the ion exchange technique involves passing a liquid such as hard water over a bed of exchange medium such as particles of resin. Chemicals causing hardness are deposited on the resin and the remaining liquid is "soft."

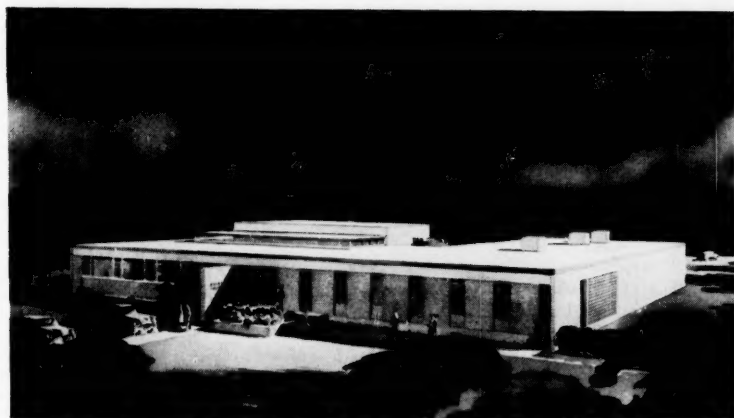
But the problem for years has been that the entire process must be shut down at regular intervals in order to regenerate the resin. This is done by passing brine over it.

U-T's new equipment allows the process to go on continuously, avoiding the shutdowns which have been so costly to industry, Peebles said.

The development is the second major breakthrough by U-T chemical engineers in recent months. In early summer, a research team headed by Dr. S. H. Jury announced the successful development of a radically new, and improved form of thermal diffusion equipment.

Thermal diffusion and ion exchange are two of the important techniques used by industry for separating one material from another within a liquid. Pharmaceutical industries, particularly, depend heavily on thermal diffusion, which uses heat and cold to achieve separation.

Peebles' new ion exchange equipment breaks the shutdown bottleneck by introducing both the liquid to be treated and the brine for regenerating the resin into a single, upright glass column. Inside the column the resin particles flow from top to bottom, being washed out through a pipe which returns them to the top again.



SAN ANTONIO. The hottest "hot lab" in the world will be completed at Southwest Research Institute before the end of the year. The \$625,000 facility will be used to determine the effect of radiation on hydrocarbon materials for Pratt and Whitney as part of their nuclear aircraft propulsion program. The new facility will cover 11,110 square feet, and will include offices, a drafting room, reception lobby with a reflecting pool and a large conference room with a viewing window of the hot lab. It is expected to be completed in late November and will go into operation by the end of the month.

### Drought Relief Studied At University of Texas

AUSTIN, TEXAS. The University of Texas Board of Regents has authorized a basic study of Texas climate which may hold a long-range promise of drought relief.

The board appropriated \$10,800 for one year and directed meteorologists and other University scientists to begin immediately a study of Texas weather facts which must be determined before practical experiments in weather modification become feasible.

Financial aid will be sought from Texas foundations for the project which board members said was the first direct step taken in Texas toward increased rainfall.

Dr. Vance E. Moyer, assistant professor of meteorology, will direct the work which will be done in association with other faculty members and graduate students.

The project envisions a complete study of the elements relating to weather such as cloud census, cloud structures, rainfall, winds, temperatures, records of past years, and many complexities about which not enough is presently known. Without more basic knowledge, little can hope to be accomplished toward increased rain, the scientists declared.

In a report made to a special committee of the board which has studied the possibility of the project during the summer, University scientists emphasized two points which will guide the study:

From the scientific point of view, it is most desirable first to conduct basic research on the diffusion and coalescence mechanism of precipitation with the aim of learning more about the processes as they operate in Texas.

Secondly, this knowledge can be applied in efforts to alleviate drought conditions. In no case, the report added, should promiscuous cloud seeding be permitted to take precedence over the necessary research.

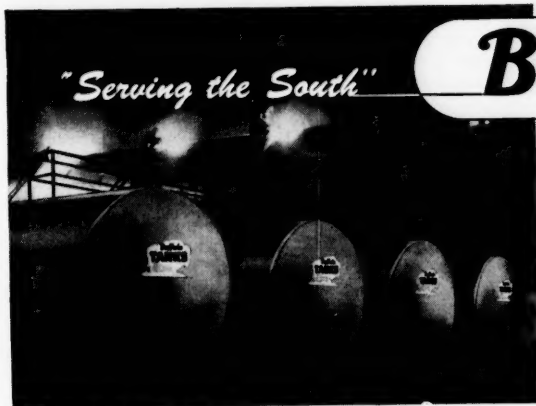
### Ga. Tech Records Signals Bounced off Meteors

KNOXVILLE. The University of Tennessee is bouncing radio signals off the trails left by meteors in a basic research project for the U. S. Office of Naval Research.

Under the terms of a \$50,000 contract with the Engineering Experiment Station, the U-T electrical engineering department will cooperate with the Georgia Institute of Technology in the search for basic knowledge on the directions from which meteors come toward the earth, according to Prof. Paul Cromwell, head of the department.

To do this, U-T is putting up a small transmitter building and 60-foot antenna a few miles south of Knoxville to beam signals at the meteor trails. Georgia Tech, holder of a similar contract, will receive and record the signals.

The focal point of the project is some 10 billion meteors, most of them smaller than grains of sand, which strike the earth's atmosphere each day. These meteors leave ionized trails of electrically charged particles, some of which are visible at night as "falling stars."



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Steel Stacks • Storage Bins  
Welded Steel Plate Construction**

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**Largest Galvanizing Plant**

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JACKSONVILLE, FLORIDA • RALEIGH, NORTH CAROLINA



## Texans Find Answer

### To Cracked Runways

SAN ANTONIO, TEX. Results of a two-year research study by Southwest Research Institute at San Antonio's International Airport may give an economical answer to repair of warping and cracking runways which were not built to withstand today's heavy aircraft loadings.

Studies by the independent nonprofit San Antonio research center for the city show that an experimental "prestressed" slab covering, developed at Southwest Research Institute, which can be laid over existing runways appears to be a sound way of strengthening the pavement and will also cut maintenance costs.

San Antonio Airport taxiways and runways are breaking up and conventional runways strong enough to withstand the load would require concrete twice as thick as the present ones.

Airport officials had two courses of action. One was to remove the old pavement and pour new concrete of increased strength to replace it. The other was to place overlays onto existing pavement to increase the load capacity to the required amount.

Southwest Research Institute scientists tested out both the conventional thick concrete overlays and a thin (four inch) prestressed concrete slab overlaid on existing pavements. The tests were made on Taxiway No. 1, which gets the hardest wear at the airport.

The San Antonio City Council appropriated \$3725 for engineering research at the airport. Steel companies donated prestressed wire. Texas Stress Concrete Corp. provided services without profit, as did Prestressing, Inc. Technical research was directed by M. M. Lemcoe, manager of structural research and development at Southwest Research Institute. Frank T. Drought, consulting engineer, represented the city in handling engineering contracts. Construction was by H. B. Zachry Co.

To avoid the expense of digging up the present runways and pouring new thick ones, Southwest Research engineers developed a thin prestressed slab which can be poured over the old runways to repair them.

## BOOKS AND REPORTS

RALEIGH. Deposits of lithium minerals in North Carolina constitute the largest block of economically recoverable reserves known in the Western hemisphere and have been estimated to represent nearly 93 per cent of the total domestic reserves of this highly strategic mineral.

This statement is one of the highlights in a study of North Carolina's lithium resources by Sam D. Broadhurst, assistant State geologist, for the Department of Conservation and Development.

Located favorably for mining, processing, and marketing, the lithium deposits, Broadhurst states, provide the United States with a well protected major source of supply.

The booklet containing Broadhurst's findings may be obtained by writing Dr. J. L. Stuckey, State Geologist, Division of Mineral Resources, Department of Conservation and Development, Education Building, Raleigh, N. C. It is entitled "Lithium Resources of North Carolina."

## OTHER RELEASES:

**Hardwood Timber Resources in Central and Northern Georgia**, by Robert W. Larson, Southeastern Forest Experiment Station, Asheville, North Carolina, September 1956, 48 pp.

**Experimental Air-layering of Shortleaf and Loblolly Pine**, by Bratislav Zak, Southeastern Forest Experiment Station, Asheville, North Carolina, August 1956, 12 pp.

**Opportunity in Manufacturing Rigid and Semi-Rigid Plastic Containers in Texas**, by Russell H. Thompson, Texas Engineering Experiment Station, Texas A.&M. College, College Station, Texas.

**Coalmining**, by I.C.F. Statham, (practical applications of theories), Philosophical Library, Inc., 15 East 40th. St., New York 16, N.Y., 564 pp., \$15.00.

**Decision of the Supreme Court of Texas on the Validity of Right-To-Work Law**, remarks by Hon. O. C. Fisher, Congressional Record, U.S. Govt. Printing Office, 11 pp.

**Forecasting Power Loads of the Future**, by James E. Watson, Georgia Business, The Bureau of Business Research, College of Business Administration, Univ. of Georgia, Athens, August 1956, 12 pp.

**Mineral Dressing Studies on the Great Gossan Lead Ore From Carroll County, Virginia**, by M. P. Corriveau, Va. Polytechnic Institute, Blacksburg, Va., September 1956, 79 pp.

**Proceedings of the Seventh Annual Southeastern Symposium on Industrial Instrumentation**, Fla. Engineering and Industrial Experiment Station, College of Engineering, Univ. of Fla., Gainesville, May 1956, 72 pp.

**Manufacturing in Florida**, by Carter C. Osterbind and Felix Muehlner, Economic Leaflets, Bureau of Economic and Business Research, College of Business Administration, Univ. of Fla., Gainesville, July 1956, 4 pp., \$.03.

**Oil in Louisiana**, remarks by Bruce K. Brown, Pan-Am Southern Corp., P.O. Box 2, New Orleans 6, Louisiana, September 1956, 3 pp.

**Rice Farming in Texas**, Bureau of Business Research, Univ. of Texas, Austin 12, September 1956, 3 pp., \$.20.

**The Birth of A Salesman**, Packaging is advertising, an address by Arthur L. Harris, Atlanta Paper Company, Atlanta 2, Ga., 18 pp.

**Tabular Summary of Foreign Waterborne Commerce of Virginia Ports, First Quarter of 1956 Compared with First Quarter of 1955**, prepared by Research Economist Va. State Ports Authority, Norfolk, Va., July, 1956, 34 pp.

**Electronics in Texas**, James H. Keahey, Texas Business Review, Bureau of Business Research, Univ. of Texas, Aug. 1956, 4 pp., \$.20.

**Directory of Georgia Architectural Firms**, P. O. Box 7446, Station C, Atlanta, Ga., 20 pp.

**The Mineral Industry of Tennessee—1953**, by Avery H. Reed, Jr., and William D. Hardeman, Jr., Supt. of Documents, U. S. Govt. Printing Office, Wash. 25, D. C., 20 pp., \$.15.

**The Fuller's Earth Industry in the Georgia-Florida Dist.**, by James L. Calver, Georgia Mineral Newsletter, Georgia Geological Survey, Agriculture Bldg., 19 Hunter St., Atlanta, Georgia, 8 pp.

**Major Activities in the Atomic Energy Programs**, Supt. of Documents, U. S. Govt. Printing Office, Wash. 25, D. C., Jan-June 1956, 260 pp., \$1.25.

**When Patience Is Not a Virtue, or the Political, Social, Religious, and Moral Life, Also The Economic, in America in 1956**, by W. H. Amerine, 209 N. Capitol Parkway, Montgomery, Ala., July 1956, 42 pp.

**Continuous vs. Batch Pulping**, Proceedings of the Fourth Annual Pulp and Paper Conference, Florida Engineering and Industrial Experiment Station, College of Engineering, Univ. of Fla., Gainesville, July 1956, 25 pp.

**Interaction of Fluoride Ions and Ground Glass**, by R. C. Specht, Fla. Engineering and Industrial Experiment Station, College of Engineering, Univ. of Fla., Gainesville, June 1956, 3 pp.

**Some Studies on the Behavior of Prestressed Concrete Columns**, by A. M. Ozell and A. M. Jernigan, Fla. Engineering and Industrial Experiment Station, College of Engineering, Univ. of Fla., Gainesville, July 1956, 12 pp.

**Water**, by A. M. Buswell and W. H. Roderbush, Fla. Engineering and Industrial Experiment Station, College of Engineering, Univ. of Fla., Gainesville, April 1956, 8 pp.

**The Condensed Chemical Dictionary**, completely revised and enlarged by Arthur and Elizabeth Rose, Reinhold Publishing Corp., 430 Park Ave., New York 22, N. Y., Aug. 1956, 1200 pp., \$12.50.

**The Case for the DC-3 Replacement**, Fairchild Engine and Airplane Corporation, Hagerstown 15, Maryland, 5 pp.





When Guy Braselton entered the prestressed concrete field, he predicted a market for the Prescon tendon would be developed on a worldwide basis. Already the market is developing across the Western Hemisphere, and Braselton keeps a map on the wall of his office to show visitors where Prescon tendons are being used.

## Dynamic Guy Braselton Busy Building Concrete Empire in Corpus Christi

CORPUS CHRISTI, TEX. Forty-nine-year-old Guy Braselton is a dark-haired human dynamo who likes nothing better than the opportunity to blaze a trail.

And he backs up his liking with a sound piece of philosophy.

"Only a tired man wants to travel a beaten path," he tells you with a smile.

Braselton has been blazing trails both literally and figuratively ever since he started to work driving a team of mules for a coal mining company in his native Arkansas at the age of 13.

Now one of South Texas' most spectacular businessmen, he is tackling the biggest—and most spectacular—trail blazing job of his career.

The job:

Building a world market for a simplified, easy-to-use wire unit for stressing concrete.

Braselton signaled the start when he announced formation of the Prescon Corporation and assumed both the presidency and major control of the firm.

Prescon is the outgrowth of a merger of Prescon, Inc., of Paramount, Calif., with Braselton's Prescon of Texas.

Like its predecessors, Prescon will devote itself to the production of stressing units of the type developed by K. H. Middendorf, the founder of Prescon, Inc.

The Middendorf stressing unit differs from other types in that it employs cold-formed heads on the steel wires of the unit to provide positive end anchorage.

Braselton tackles the mammoth production and marketing job surrounded by one of the finest technical staffs ever put together in the prestressing field.

The staff is built around Middendorf, who will serve as chairman of Prescon's board of directors and as the firm's chief technical and research consultant; Loris L. Gerber, who held top positions with both of Prescon's predecessors prior to the merger; and Lultcho Boduroff, a leading authority in the prestressed field in Germany and Australia

before moving to the United States.

And Braselton—a man of unmistakable frankness—says that is just as it should be.

"I am not a technician," he freely admits.

"I am a businessman. I am just thankful I have been given the faculty for recognizing men with specialized talents and helping to situate them so we all can work together."

Braselton's entry into the prestressed concrete field was not due to any flight of fancy.

In business-like fashion, he made a careful appraisal of his own.

Then he moved into action.

Braselton first was attracted by the potentialities of prestressed concrete while he still headed the Braselton Construction Company, a general contracting concern he founded in 1945.

"We had occasion to use prestressed concrete in several jobs at a time when it still was regarded skeptically by a lot of people," Braselton points out.

"What we learned was a real eye-opener."

By the latter part of 1954, Braselton was so thoroughly sold on the future of prestressed concrete that he began considering entering the production of stressing units.

By January, 1955, Prescon of Texas had opened its doors and Braselton had placed his construction company in the hands of his two oldest sons, Billy and Bobby, so he could give his undivided attention to prestressed concrete.

During its 15-month life, Prescon of Texas developed a brisk business that grew constantly brisker.

And Braselton's confidence in the future and versatility of prestressed concrete grew, too.

He provided the stressing units for a lightweight concrete floor in a church in San Antonio, Tex. . . . for the walls and girders of a church in Sweeny, Tex. . . . for a 30,000-foot warehouse building in Houston, Tex. . . . and for two warehouses, a school cafeteria, a shopping center, and a refinery pump-house in Corpus Christi.

Braselton's trail blazing, however, was not confined to Texas. He was hunting—and getting—contracts for the sale of his units elsewhere.

He supplied units for 100-foot concrete beams in a gymnasium in Jackson, Tenn. Others went into rectangular water tanks at Wagner, Okla., and Midwest City, Okla., and into a circular tank at Denver, Colo.

## DIAMOND PERFORATED METAL

... on the  
Socony Mobil Building

New York City's newest, largest and finest metal-clad office building, sheathed with more than 400,000 sq. ft. of patterned stainless steel, is also the largest commercial structure to be, initially, completely air conditioned. On the top three floors, devoted entirely to air conditioning and other mechanical equipment, the wall panels are perforated to permit free passage of air at low velocity.

It was our privilege to perforate the more than 40,000 sq. ft. of stainless steel sheet required for that purpose—under a sub-contract and in accordance with the specifications of the engineers who designed the very modern air conditioning system.

We appreciated, very highly, the opportunity to participate in such an outstanding achievement but are equally interested in any other requirement for perforated metal—no matter how large or small—and have hundreds of specialized tool arrangements which assure prompt, accurate, service. Catalog 39 contains complete working data and shows many interesting applications in its 32 large illustrated pages. Write for a free copy.

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## NAMES IN THE NEWS

In Oxford, Miss., Braselton supplied stressing units for the concrete walls, girders, and decks of a factory covering 100,000 square feet. At Loveland, Colo., he sold units to the builder of a lift-slab concrete school building. And in Wichita, Kans., and Las Vegas, Nev., and St. Louis, Mo., he found other markets.

### Different Sales Technique

In each instance, Braselton points out, his organization offered the contractor full assistance in putting the stressing units into use.

"But we tried to avoid actually getting in the business of producing finished stressed concrete," Braselton adds.

"We drew that line because we felt it was essential for our customers to learn how to use the stressing units themselves.

"Only in that fashion will prestressed concrete ever come into widespread use."

Braselton was born in Russellville, Ark., in 1906. By the time he was 17 he had—besides driving a mule team—fired a boiler, driven a dump truck, mixed concrete, and worked as an apprentice carpenter.

At 20, he was a concrete inspector on a construction project to extend the Quanah, Acme, and Pacific Railroad across West Texas from Roaring Springs to Floydada.

In 1934, Braselton went to work for a construction firm in Abilene, Tex. He stayed 11 years, rising to the position of general superintendent.

Braselton's last assignment with the Abilene firm was to supervise the construction of a building in Corpus Christi.

"I knew the day I arrived in Corpus Christi that I had found the city where I wanted to make a start for myself," Braselton says.

After the construction job was completed, he returned to Abilene long enough to resign his position and sell his home.

In a matter of days, he had moved his family to Corpus Christi and had started the Braselton Construction Company.

Braselton expects to handle the distribution of Prescon stressing units through a sales force of his own and through licensees.

He already has distribution arrangements in Tennessee, Washington, California, Nevada, and Kansas. Prescon's own Rocky Mountain Division has been

opened in Denver under Boduroff's direction.

"We intend to extend our distribution to the rest of the United States in the very near future, and we already are looking toward marketing arrangements in other countries of the world," Braselton said.

"This is only the start of what we feel is a practical adventure."

What more could a born trail-blazer ask for?

### OTHER NEWSMAKERS:

**Carter L. Redd**—elected General Electric's Commercial Vice President for the Southeastern District. He succeeds **Claud J. Hendon** who retires at the end of the year.

**Robert C. Bennett**—promoted to production manager of Atlas Powder's Aquaness plant in Houston. **Paul C. Briggs** becomes acting manager of the company's food emulsifier plant in Memphis.

**James L. Guthrie** and **Donald R. Nielsen**—appointed research chemists at Columbia-Southern Chemical Corp's. Corpus Christi plant.

**Ralph J. Martz**—promoted to plant manager of Diamond Alkali's Belle, W. Va., plant.

**Robert W. Meals**—appointed assistant manager of Allegany Ballistics Laboratory, the navy-owned research center operated by Hercules Powder near Cumberland, Maryland.

**D. J. Houghton**—elected executive vice president in charge of all the operating divisions of Lockheed Aircraft Corporation. Other promotions included **H. Fletcher Brown** to assistant general manager of the Georgia Division; **Ralph J. Osborn** to manufacturing manager; **R. A. Mackenzie** to assistant manufacturing manager; **H. Lee Poore** to production manager; **William B. Rieke** to assistant production manager; **Nicholas Ricciardi** to director of material.

**William A. Dupraw**—joins NRC Metals Corporation as Chief Chemist, and Oscar R. Hardison has been appointed Controller of the Santa Rosa plant in Florida.

**L. M. Smith**, president of the Alabama Power Company, awarded an honorary degree, Doctor of Science, from the University of Alabama at their commencement exercises on May 27th.

**Walter Nollenberger**—appointed by the Square D Company as manager of a major new manufacturing plant to be built in Lexington. At the same time, the company appointed **Stephen Kovach** as manager of a regional assembly plant now under construction in Atlanta.

**George T. Naff**, president of Texas Eastern Transmission Corporation, elected vice chairman of the board and **Orville S. Carpenter**, vice president and comptroller, named as president and a member of the board of directors.

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M. L. Shadburn, State Highway Engineer of Georgia, discusses employment prospects for civil technicians with David James, Southern Tech graduating senior.

## Graduates of Southern Tech Fill Gap Between Engineers and Skilled Labor

By ROBERT HAYS

Deep down in Dixie—down South where King Cotton's throne has been trembling lately with the clanking of bulldozer tracks and the scraping of drag lines—an unusual college is operating.

This college, the Southern Technical Institute of Chamblee, Georgia, is

playing an increasingly important role in the development of the nation's last industrial frontier. Southern Tech's graduates are shaping the land in the Land of Cotton. Graduates in Civil Technology, *one of Southern Tech's eight programs, serve as skilled technicians who plan the work done by the bulldozers, the drag lines, and the cement mixers.*

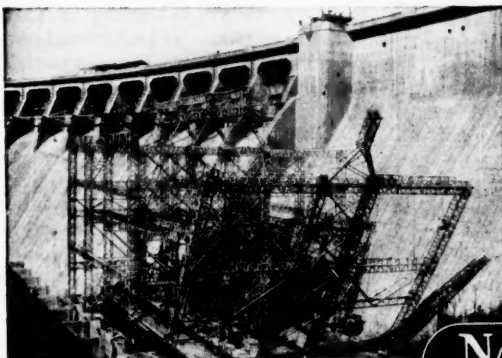
Like the complex charts of its

plans, industrial expansion in Dixie is not a single picture, but several. It is not a single piece, but many pieces in a mosaic. One of the most important pieces is the training in Civil Technology which Southern Tech offers the young men of the South. These young men will be surveyors, contractors, draftsmen, construction bosses, highway supervisors, cartographers, topographers, and subdivision designers. Southern Tech, as industrial leaders often say, will thus supply the "missing links," the technicians for the industrial team. Southern Tech has already supplied over 65 technicians in Civil Technology.

As the South's only fully accredited technical institute, Southern Tech has held its unique position since its establishment in 1948. Civil Technology, at first offering a two-year certificate and now offering the Associate in Science degree, was one of the original programs set up at Southern Tech. Like the rest of the courses, the program in Civil Technology is unique in its field.

Its unique features stem from its combination of theoretical instruction, laboratory and field practice, and basic science—in approximately equal amounts. That's the combination industry needs in its employees as it moves down South. To understand why industry needs this combination one must understand the situation which causes the missing link, both in education and in industry.

Basically, construction work—like any production today—demands teamwork in a very real sense. For instance, a cloverleaf turn on a super-highway requires teamwork from its conception to its opening for traffic. With planning and design one phase



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NASHVILLE, TENN. — BESSEMER, ALA.



of teamwork begins. Civil Engineers work with municipal and state representatives. They plan the cloverleaf on paper and perhaps make a scale model of it. But a cloverleaf on paper is not a cloverleaf ready for motorists hustling to and from work.

Before plans become cloverleaf turns, two other members of the team must translate the plans into action. The second member of the team, the skilled laborer, must operate the bulldozer, cut and fill, put in culverts, and grade. The third member of the

cloverleaf construction team is the Civil Technician. He must transform plans and specifications into orders, work schedules, and inspection checks. He must serve as a middleman between the engineers and the skilled workers.

Industry has long recognized the need for this "third man." People don't work without qualified supervision. Without supervision and inspection there's always room for a slip 'twixt the profiled plans and the work in the field. Rapid expansion has

caused a shortage of third men. Usually, engineers trained for design and planning are too busy both to plan and to supervise. Skilled workers seldom know enough theoretical civil engineering to work without supervision. Thus the technician fills a critical position as he serves as the third man, the missing link.

Unfortunately, Southern education has not recognized the need for the missing link. In many Northern states, technical institutes were established almost as soon as the Constitution was ratified. The nation has over two dozen fully accredited technical institutes; but below Mason and Dixon's line, education has followed the conventional four-year pattern. The word "college" has meant four years of liberal arts or engineering training for business or the professions.

Now, every educator had read of the shortage of engineers—figures were quoted and misquoted until readers and listeners were not sure whether America needed 8,000 or 80,000 engineers. But few had conceived of an obvious solution to the shortage of engineers: offer college students a combination of practical and theoretical education so that they could relieve the engineers of much detailed work. Such an approach would not create more engineers, but it would ensure that the available engineers better use their time.

The task of supplying the missing links was assigned the Southern Technical Institute by the Board of Regents of the University System of Georgia and by Southern Tech's parent institution, world-famous Georgia Tech.

The visitor to the Civil Technology Department can see clearly how Southern Tech carries out its assignment. Like any educational institution Southern Tech reflects largely the qualification of its instructors. Southern Tech's instructors in Civil Technology have a background embracing both academic and practical experience. For instance, the head of the Civil Technology Department, C. T. "Hap" Holladay, is both a registered Civil Engineer and a registered Land Surveyor. He holds a Civil Engineering degree. He lectures to meetings of land surveyors. But he served his practical apprenticeship in the mountains of East Tennessee with the TVA. When he shows his students how to set up an alidade or a transit, he

## LANGLEY FIELD ROCKET HITS 6,600 MPH AND ZOOMS OVER MILLION FEET IN SKY

LANGLEY FIELD, VA. A four-stage rocket-propelled research missile has been fired by scientists of the National Advisory Committee for Aeronautics at its Pilotless Aircraft Research Station at Wallops Island, off the Eastern Shore of Virginia. It attained a speed in excess of 6,000 mph at high altitude and penetrated more than a million feet into the sky.



In the nose of the research missile was packed instrumentation and telemetering equipment to record and then transmit to a ground receiving station, information about aerodynamic heating. From the ground, the rocket's journey—which ended in the Atlantic Ocean—was monitored by both radar and special photographic equipment.

Propulsion was supplied by four rocket motors, fired in sequence. As each of the first three burned out, it dropped free. The first two motors were of the type used to boost the Nike missile. The third motor, also a solid-fuel type, was somewhat smaller. The fourth motor was the smallest, and was a part of the missile itself.

The scheduling of the motor firings was so arranged that the research missile coasted upward for a brief period after each rocket had been exhausted. In this way, maximum speed and altitude were attained without the danger of excessive temperatures (due to aerodynamic heat-

ing) from friction of the dense air at low altitude.

Data obtained from such high-speed, high altitude rocket firings by the NACA are urgently needed by the Armed Services and the guided missiles manufacturers. The "vehicles" used by the NACA are not prototypes for service missiles; they are designed and used to obtain research information.



draws on his wide experience.

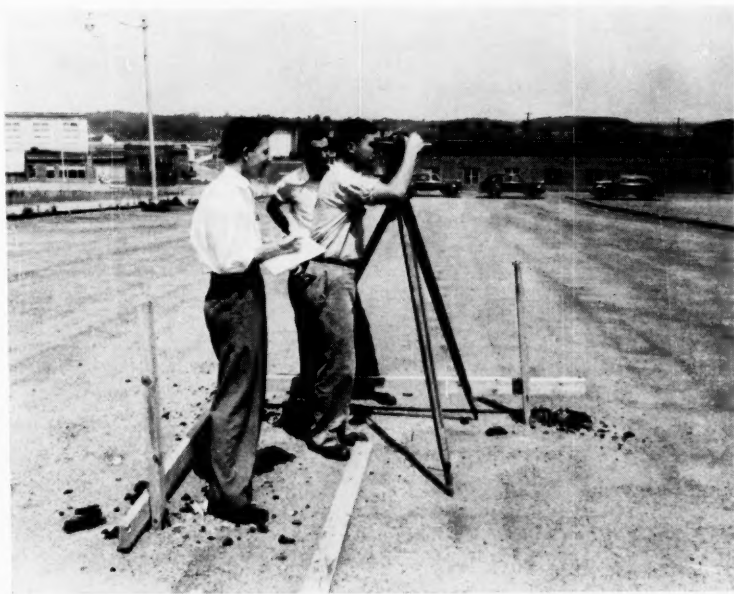
Another Civil instructor, Bob Myatt, gives the same type of practical instruction to his classes in construction methods and materials and costs and estimates. The problems presented in his classes may come from a book, or they may come from field experience—problems that won't be in the books for years yet.

To function effectively as the missing link in governmental and industrial construction work, a civil technician needs training in many areas. He must know surveying, so he gets four courses in surveying (probably more surveying than any other college in the country offers). He must learn to compute land areas and take contour observations. Much preliminary work in wooded areas involves aerial photography, so the Civil Technician at Southern Tech must study aerial photogrammetry and the preparation of maps from aerial photographs.

Besides the highways on which they commute to work, industrial employees must have modern plants in which to work; hence the Civil Technicians from Southern Tech must know building materials, steel and concrete structural drafting, and heavy construction methods. The graduate of Southern Tech's Civil Technology program will therefore be able to talk both the language of the engineer and the language of the bulldozer operator.

Talking the language of the civil engineer means understanding the drawings the engineer uses, steel and concrete drafting, layout of lands and subdivisions, preparation of highway plans, making of contour maps. The same store of knowledge will make the civil technician from Southern Tech useful to public organizations too. Industrial development demands expanded municipal services; hence, the civil technician studies water and sewage treatment; distribution systems; reservoirs and tanks; and the flow of liquids through pipes and channels.

Visitors to the Civil Technology classrooms and laboratories may express their amazement at the range of practical subjects offered. They also express their amazement at the field and lab work the students do (to get an "A" in advanced surveying, for instance, a student must be able to measure distances—in the horizon-



In Southern Tech's Civil Technology laboratories the students meet problems just like the ones they must solve after they get their degrees.

tal plane—to an accuracy of one part in 5,000. That's an accuracy of roughly one foot in each mile!) When they overcome their surprise, though, the visitors usually remark that Southern Tech does not resemble any college they have ever seen. But these visitors soon see that Southern Tech is a college and not a trade school. Any college program is expected to offer basic subjects, mathematics, physics, and English. Here Southern Tech most closely approaches the traditional concept of higher education. The Civil student studies chemistry, mathematics through analytical geometry, three courses in physics, and interestingly enough, four courses in English. (Technicians must be able to write reports, understand specifications, and speak to groups of people.)

Throughout the program the Civil student learns that opportunity awaits him if he will just persevere. The average starting salary of the Southern Tech graduate is more than \$325.00 per month, considerably above the prevailing beginner's wage in the South. Many graduates start at a higher figure. The response to surveys of the Placement Office indicate that almost all of the graduates, even in the short time since they have graduated, have achieved excellent

promotional records.

Some graduates have sought the advantages of employment in large organizations—in consulting engineering firms and in highway contractors' companies. Some have sought professional standing as licensed land surveyors. (After two years of practical experience, the graduate in Civil Technology can take the state examination for surveyors.) Some have gained independence as self-employed contractors. Still others have gone to work in governmental highway or utility departments.

All have been products of Southern Tech's serious atmosphere. The Civil students participate in sports. Some achieve campus prominence for scholarships and are elected to Tau Alpha Pi, the National Honor Society. Many have joined the Society for Advancement of Management, the Toastmasters Club, or the departmental club. But primarily they have attended Southern Tech to get as much education as possible in their six-quarter program. They have learned while at college of the splendid opportunities to grow as industry grows down South. They also have learned that a technical education is not an escalator to success, but it is a stairway to success.



A group picture of the delegation as they prepared to board their chartered bus at Cave City, Kentucky. On the second day of the tour the group visited six cities before pulling into Bowling Green for the night.

## Kentucky Chamber of Commerce Guides Industrialists On Tour Through State

By QUENTIN ANDERSON

LOUISVILLE. Speeding across West Central Kentucky last month, some two dozen visiting industrialists reflected the warm feeling of hospitality that had been extended to them in the 28 cities visited on the State's third industrial tour.

Their comments also revealed that they considered this State redhot for industrial expansion. Many would be going back to their firms the next morning and tell of the marvelous expansion opportunities that awaited them in Kentucky.

Jim Zimmerman, President of the Industrial Expansion division of the Kentucky Chamber of Commerce, along with associates, Paul Grubbs, and Thomas H. Watkins, had rolled out the red carpet for the visitors. They had also exposed the predominantly Northern industrialists to many, many favorable possible plant locations in the area.

Talk to Zimmerman about the cost of such an endeavor like the trip, and he'll tell you that the goodwill brought about them—regardless of whether or

not a single company locates a plant in Kentucky — is well worth the money they spend.

One plant located in the region that was directly attributable to one of the former tours. Another was located in the State in a more indirect way. One participant of the tour happened to tell a friend of a plant site that he had seen while on the trip. His friend became interested, and consequently a large plant was erected in Kentucky which otherwise might have stayed up north.

Whether anything ever comes of this particular tour is still open for speculation, but regardless of this, the entire contingent was presented keys to one of the most hallowed spots in Kentucky.

While at Bardstown, the group visited the former home of Judge John Rowan. This is the house in which Stephen Foster penned many of his famous songs, including the immortal, "My Old Kentucky Home."

After being bid farewell by two comely models at the beginning of the trip, the party toured the city of Louis-

ville for two hours before Greyhound bus driver, Charley Wells headed his big vehicle towards Shelbyville, the initial stop. From there, the men traveled down to Taylorsville, Bloomfield, Springfield, and Lebanon, where they ate lunch. Shortly after lunch, the group departed for Campbellsville, Greensburg, Munfordville, Horse Cave and spent the night in Cave City.



A portion of the group is shown here in front of "My Old Kentucky Home" at Bardstown. This was the house in which Stephen Foster penned the internationally famous song.

The group was taken through Mammoth Cave shortly before dinner. Even the immense beauty of the underworld wonder couldn't cast a shadow on an experience that had been witnessed a few stops back in Munfordville. There in that town of 392 citizens, a turnout that stood unrivalled by any of the other towns previously passed through, 4000 persons crowded the bus and bid the delegation hello.



Two comely models served coffee at the breakfast in Louisville and later bid the group farewell as they prepared to board the bus.

One industrialist remarked that he thought the whole town must have shown up. Actually there were many more than just the townspeople. News of the tour's arrival had spread throughout the country, and they too wanted to show their enthusiasm for possible incoming industry.

Tour members were impressed with the need for industry in Kentucky. The

## KENTUCKY TOUR

chief problem in over half of the towns visited, was that the city's youngsters were moving out of the cities in wholesale style simply because there wasn't anything that could be done within the cities to earn a livelihood. On the other hand, a few cities frankly admitted that it would be four or five years before they could absorb the industries that had recently moved in.

This attitude was greatly appreciated by the industrialists and many of these cities undoubtedly went down in "future books."

### Bauer & Black In Franklin

One passenger, Bud Hanson from Chicago, was particularly impressed with the city of Franklin. His company, Bauer & Black had recently decided to erect a \$1.4 million plant there, and Hanson was coming down around the first of the year to take over as plant manager. Hanson delivered a short talk at the luncheon break in that town.

Afterwards, when the party had settled down for the night in Bowling Green, the official photographer for the State, Arnold Washburn, congratulated him. Washburn had accompanied Governor Happy Chandler to Chicago for the Democratic convention and had been on "a million of these things before." Walking up to Hanson, he said, "Thanks for not going too long this afternoon, you said just enough, and didn't throw a lot of junk into your talk."

### Last Leg Is Interesting

After leaving Kentucky briefly for a couple of feet down at the outskirts of Guthrie, the tour headed towards Elkton, Russellville, and Auburn, before pulling into Bowling Green for the night.

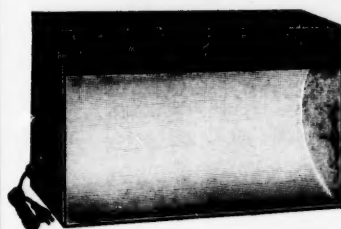
After leaving that city early the following morning, Morgantown was the first on the agenda. After that came Beaver Dam, Hartford, Leitchfield, Elizabethtown, Hodgenville, New Haven, Bardstown, Lebanon Junction and Shepardsville before the impressed tourists made flight connections back in Louisville.

At the airport the tourists ran into some trouble with bulging shopping bags that were filled to the brim with Kentucky products that had been given to them at the different cities. Perhaps there were as many as fifty such articles ranging from a Lincoln bank to a miniature whiskey bottle. However, everyone managed to get their bundle on board without too much red-tape.

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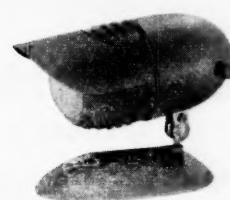
17416—LAMP, Titration, Fluorescent \$20.00

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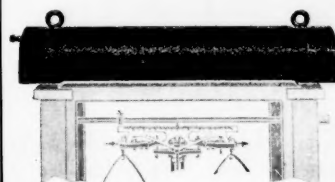
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## Industrial Health Programs

By **LOGAN T. ROBERTSON, M.D.**

**Is your in-plant health program adequate? Does it leave loopholes for union-created friction? Here is a challenging discussion of a timely subject by a leader in the field. Dr. Robertson, of Asheville, N. C., is consultant in occupational health to numerous industrial firms and to the Surgeon General of the Army.**

**LAKE LOGAN, N. C.** In May, 1956, fifty-two industrial physicians and executives, representing over four million employees, met at Lake Logan, North Carolina, (under the auspices of The Champion Paper & Fibre Company), to discuss a too frequently neglected subject—"The Health and Medical Aspects of the Labor-Management Relationship." The conclusion reached by the conference is perhaps best summarized by these remarks of T. G. Ford, Director, General Industrial Relations, American Enka Corporation: "As a member of management, I believe the most important single thing that came out of this conference was a new and clearer realization and appreciation of the stake industry has in occupational health; that

is, the size of the stake for which we in management and you in industrial medicine are playing."

*Manufacturers could not go more on record than by Mr. Ford's continuing remarks, "If private industry is to survive, it must be prepared to provide for its casualties, and at the same time do everything possible to hold these casualties to a minimum. This involves preventive, curative, and rehabilitation activities, all of which fall within the province of industrial medicine and occupational health. Thus, management must lean heavily on industrial medicine and the industrial physician in meeting its future responsibilities."*

Too often in considering the health needs of the industrial worker we have

considered those needs only for the time he punches his card in and out of the shift. This despite the fact that personal injury and disease causes sixty or more times the work absence that direct occupational causes do. It is no longer a question of keeping the worker "feeling good" while he works; the enlightened industrial medical program must look into the man's twenty-four-hour-a-day health and health needs.

The cost of neglecting the employee's health needs will be measured, primarily, in lost production. No person can be 100% useful when he is not well, and usefulness and productivity are one and the same thing. For example, in one company the working days lost due to illness were cut by over 41% in the first five years of their preventive in-plant program.

Stated in another way—if we relate this to the average industrial worker's weekly pay check as reported in the statistical abstract, this company saved over \$35,000 in 1953 by the inauguration of this medical program.

Another positive benefit to the company with an objective industrial medical program is the saving in workmen's compensation costs. Not only is there a decrease in the "previous condition" compensation claims, but the rate itself can be directly affected.

In the same company as quoted above, the workmen's compensation rate dropped 44¢, or nearly 64%, in the first five years of their program.

Other profits in the health maintenance of individual employees will be the improvement of the safety record, easing of the cost of group hospitalization insurance, and other sick benefits, the protection of the investment in trained employees, and the building of employee morale. Surely, with these benefits in mind, we can second Mr. Ford's statement that if private industry is to survive, management must lean heavily on industrial medicine and the industrial physician in meeting its future responsibilities.

It has been said, "Curative medicine is concerned with the horizontal patient, whereas preventive medicine keeps him vertical and productive." In an in-plant medical program we are primarily dealing with preventive medicine, and since the very nature of man presumes degeneration of the body and its organs, some measure of such degeneration is the key to the individual's health needs. With this in mind, a minimum effective program will be certain



to include the following:

- (A) Examination:
  - (1) Pre-placement
  - (2) Periodic
  - (3) Executive
  - (4) Return after Illness
  - (5) Promotion
  - (6) Separation
- (B) Medical Education
  - (1) Publications
  - (2) Posters
  - (3) Movies
  - (4) Individual Contacts
- (C) Personal Health Counseling
  - (1) Physician
  - (2) Nurse
  - (3) Counselor
- (D) Environmental Control
  - (1) Toxicology
  - (2) Industrial Hygiene
  - (3) Sanitation
  - (4) Engineering
- (E) Proper Care of Injuries and Illnesses

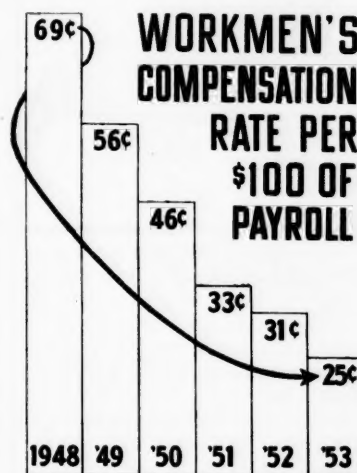
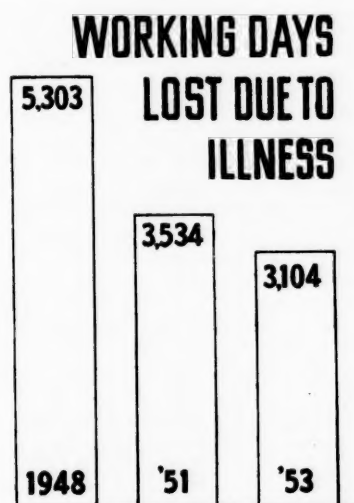
Regular plant visits by doctor and nurse are essential and should not be confined to "sick call." Rather than define and describe each of these preventive medicine activities, which are in the main self-explanatory, we must find the answer as to how such a program can be made available to the

small industrial plants. Less than 1% of the companies in the United States employ more than 1,000 workers, and it would appear at first glance that such companies cannot afford the cost of a program as outlined above. In an attempt to solve this problem, Occupational Health Services has organized a local in-plant medical service and has been able to bring preventive medicine to small companies. For a few hundred dollars per month, these companies are provided a service that might otherwise cost thousands of dollars. This includes regular in-plant visits by a doctor (both "sick call" and plant rounds), as well as regular dispensary hours by a registered nurse. No one company could afford a full-time doctor and nurse, but by combining their needs and sharing the costs an effective program can be very easily organized. Most communities have physicians who are serving industry on a part-time basis, and many will specialize in occupational medicine as soon as management can utilize their time effectively. Five or six small companies can in this manner assure themselves of an industrial medical program as efficient and effective as that found in any 10,000-employee plant.

The problem of lost time due to illness can be partially solved by industry in the same efficient, effective manner as many are solving their industrial hygiene and safety problems. The cry, "We can't afford it!" is as ridiculous as Sandy MacDougal's parting injunction to his wife, "Noo, Janet, dinna forget to mak' wee Sandy tak' off his glasses when he's no lookin' through them."

Industrial management cannot afford *not* to move into this field of preventive medicine! This does not mean that industry should provide total medical care, but since organized labor and government intend moving into the field, industry will foot the bill either through labor contract negotiations or increased taxes. If you are going to pay the bill, you should at least have some control over how the money is to be spent, and receive credit for your efforts. Too often employee health is considered in the same light as the so-called "fringe benefits." This, too, is an utterly ridiculous classification, as so often happens when things are labeled. Truly such programs are an essential part of production.

Outside of the employee and his family, no one has a more direct inter-



#### LOST TIME TRIMMED IN ONE PLANT OVER FIVE YEAR PERIOD

In one plant the working days lost due to illness was cut by 41 percent in the first five years of their preventive inplant program.

In the same company, the workman's compensation rate dropped 44 cents, or nearly 64 percent in the same five year period of the program.

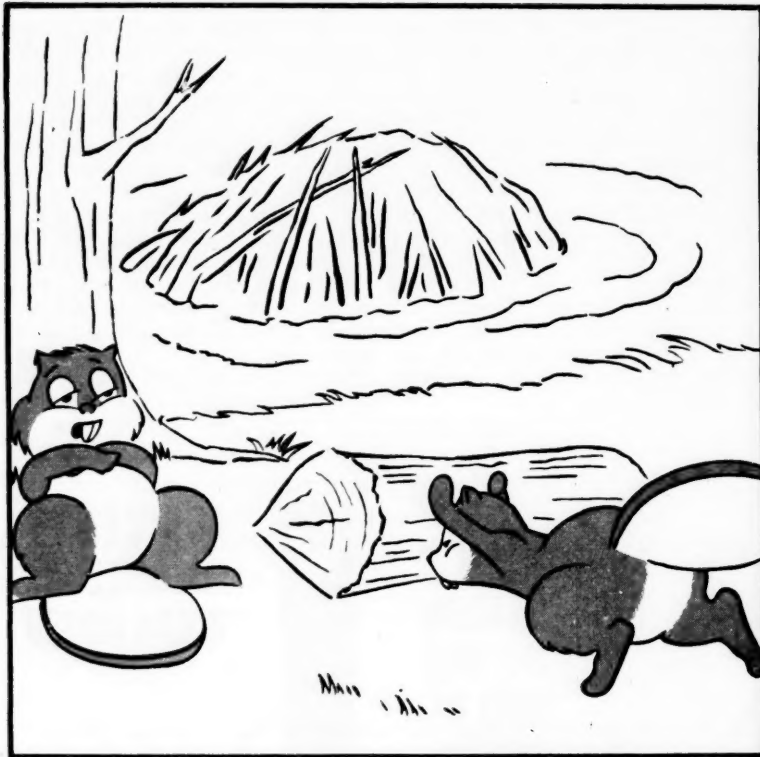
Another aspect of the in-plant medical program is the reduction of accidents. This causes a reduction of the cost of group hospitalization insurance and other related benefits.

## INDUSTRIAL HEALTH

est in his health than has his employer, and this I believe is more true than can be said of either organized labor or government. These latter, however, intend to move in if management neglects to protect its insurable interest. As a matter of fact, Leonard Woodcock, International Vice President — U.A.W., in his talk at the 1956 National Industrial Health Conference, quite honestly admitted that labor intends to team with government in meeting these needs. Speaking of industrial hygiene programs, he said, "We do not wholly trust

industry-directed programs. We will support added appropriation from local, state, and federal government for this objective."

To my way of thinking, it is not that there is lack of trust so much as the obvious need for organized labor to have a "whipping boy." The cry of "Robber Baron" can no longer be sounded in an economy where labor-government-management is tending toward a system of checks and balances. Mr. Woodcock is sounding that cry, however, when he suggests that the in-



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**REMEMBER:** No matter what you build, your architect and engineer will help you build it better.



Dr. Robertson and his associate, Dr. Britton, in front of the mobile units at a Southern plant.

dustrial physician is prone to disregard the patient-doctor relationship and be a blind supporter of management. As he stated in his Philadelphia talk, "As long as the industrial medical department regards itself as a branch of management first and medical practitioners second, we do not want the

Statement of the ownership, management, circulation, etc., required by the acts of Congress of August 24, 1912 and March 3, 1933 and July 2, 1946, of MANUFACTURERS RECORD, published monthly at Baltimore, Maryland, for October 1956.

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H. McKinley Conway, Jr.  
 Owner

Sworn to and subscribed before me this 18th day of September, 1956.

Hetty O. Harrington  
 (My commission expires July 16, 1958)



An interior view of the clinical laboratory trailer. Doctors and laboratory technicians work hand-in-hand the year around in their never-ceasing efforts to curb disease in American factories. Three mobile units travel throughout the country in all types of weather, visiting plants, trying to strike out disease before it has a chance to start. Dr. Robertson and his colleagues believe in "preventive" type medicine and believe that the number of sick calls in the future can be substantially reduced.

worker or members of his family going to the plant for medical care." In my personal association with leading industrial physicians, I have found very little evidence to support Mr. Woodcock's fears that such is true. As a matter of fact, the opposite is true and often a management-medical conference gets as hot as a labor negotiation meeting when this patient-doctor relationship is threatened. As members of the medical profession specializing in industrial medicine, we recognize our professional responsibility to provide medical services to all who comes seeking, whether they be union-sponsored or management-sponsored. Whether or not you like union participation in meeting the health needs of the workers, they intend doing it wherever management fails to grasp its opportunity. Since, however, organized labor represents only about 26% of our work force, most educational efforts in regard to the need for adequate in-plant medical services must be directed at management.

The health needs of the working people are not being met, yet must be met. Who will take the initiative — labor, government, or management? Chances are that management will be the slowest to act because the one who pays the bills is always the most cautious when it comes to spending money. However,

when the benefits to the employer are as pronounced as those provided by a well-planned in-plant medical program, caution might well become short-sighted and disastrous. Mr. Woodcock again gives management fair warning: "Management cannot merely sit back and resist efforts to expand and improve general health services as a possible addition to management costs. *If it does so, it will lose leadership in this field because progress will be made—with or without management.* Labor is going to continue and accelerate its interests and activities in health." Mr. Woodcock is to be commended for his straightforward statement.

Management must make up its mind soon to tackle this problem of employee health. Too late with too little may mean government control or union domination. As managers, you are faced with an immediate decision. Don't be like the man who rushed up to the ticket window and said, "I'm in a hurry to get to New York. How soon can you get me there?" The ticket agent answered, "We have a train leaving immediately that will get you there in twenty hours. Tomorrow evening, though, we shall put on a train that will make the distance in eighteen hours." "All right," rejoined the man (management), "I'll wait till tomorrow evening."

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## New "Index of Rank" Shows Value of Growth Industries to South

By CALDWELL WALKER

WASHINGTON, D. C. Powerful forces, both within the South and without, are speeding up the Region's industrialization.

Within the South, a strong influence is a still available work force, in contrast to general labor tightness throughout most of the United States.

Added to this is a still available supply of local capital, in contrast to general money tightness throughout nearly all of the rest of the country.

These flexible influences serve to emphasize more vividly the strategic advantages of the South that are always present with respect to materials, transportation and power.

Outside the Region, the value of decentralization and dispersion takes on constantly greater weight. Aside from serious military considerations there are others of equally great importance. It is no longer efficient or profitable for a number of large manufacturers to try to supply the demand for their output from one single plant, or a few concentrated plants. The result is a spread of operations into new territory that is nearer to the sources of demand.

### South Leads Nation

The effect of the foregoing forces has been a swifter speed in the development of Southern manufacturing. The South is leading the Nation in both overall manufacturing expansion and also in expansion of a great majority of the 20 major groups.

Total value of manufactured products in the South was 5.6 times greater in 1955 than in the last census year before the last war. Value of products for the entire U. S. was 5.1 times that of prewar.

Furthermore, the South led the Nation in expansion of 13 industry groups; tied in 3 and lagged in only 4.

The groups in which the South set the pace were in the order of their growth, Transportation Equipment, Electrical Machinery, Machinery, Paper, Chemicals, Rubber, Petroleum-Coal Products, Fabricated Metals, Food, Textiles, Apparel, Leather, Tobacco.

Those in which the Nation at large set the pace were Miscellaneous Manufactures, Primary Metals, Stone-Clay-Glass, Lumber.

Those with the same rate of growth in both Region and Nation were Printing, Furniture, Instruments.

### Rating Southern Industry

Rate of growth is unquestionably important. No matter how small the base, if an industry is growing swiftly its future can be rated good. At the same time some other industry, with a wider base, may be more immediately important from the standpoint of actual volume.

Somewhere within the combination of these two measures—growth and volume—is to be found the real worth of an industry to the region of its location.

To form some idea of the relative value of the South's manufacturing industries, a scoreboard outline can be of help, as follows:

With index of rank being equivalent to rating as to first, second, etc., value

of the industries to the South would be in the following order: Chemicals, Petroleum-Coal Products, Paper, Textiles, Lumber, Transportation Equipment, Food, Machinery, Electrical Machinery, Tobacco, Stone-Clay-Glass, Fabricated Metals, Rubber, Apparel, Furniture, Primary Metals, Leather, Printing, Miscellaneous Manufactures and Instruments.

### Markets A Prime Incentive

Tied in with the growth and prospects of these industry groups is another type of growth. It is the growth of Southern markets.

It is rare that industries grow consistently without adjacent markets. There are instances where such growth has taken place for certain lengths of time. In such cases it has been lack of development elsewhere that permitted such growth. In the long run real industrial growth will parallel growing markets.

Well established manufacturers, with nationally accepted products, want their full share of the Southern market. In order to get it they feel that a new or branch establishment will best accomplish the objective. While Southern partisanship has cooled greatly since the turn of the century, it still carries a potent charm in the direction of good will. Productive capacity in Southern territory makes the product thereof more attractive to Southern users.

SOUTH'S MANUFACTURING SCOREBOARD

Industry	Rank in Growth	Rank as % of U. S.	Sum of Ratings	Index of Rank
Food .....	9	8	17	7
Tobacco .....	20	1	21	10
Textiles .....	10	2	12	4
Apparel .....	14	11	25	14
Paper .....	4	7	11	3
Printing .....	17	12	29	18
Chemicals .....	5	4	9	1
Petrol-Coal .....	7	3	10	2
Rubber .....	6	16	22	13
Leather .....	18	10	28	17
Lumber .....	11	5	16	5
Furniture .....	19	6	25	15
Stone-Clay .....	13	9	22	11
Prim. Metals .....	12	13	25	16
Fab. Metals .....	8	14	22	12
Machinery .....	3	18	21	8
Elec. Mach. ....	2	19	21	9
Trans. Equip. ....	1	15	16	6
Instruments .....	16	20	36	20
Miscel. Mfg. ....	15	17	32	19



## Previously Wiped Out Citrus Growers Feel Third Try Will Prove A Charm

**HARLINGEN, TEXAS.** Twice already, Lower Rio Grande Valley farmers have banked on citrus fruit—and lost heavily. But they are trying for the third time, and it looks as if they have a winner.

In the rich alluvial delta sloping away from the river, where four crops a year have been taken from a single truck farm and natives say that your feet take root if you stand in one place too long, the golden harvest of citrus fruit has registered a total value as high as \$18 million (1947-1948). But they have also plummeted to as low as \$1,726,000 (1951-1952).

Bonanza or bankruptcy depends on the weather man, for citrus trees die when exposed very long to temperatures below 26°. That is why Valley citrus growers sensed disaster in late January 1951 when the thermometer began to fall. Only two years before, the 20° freeze of January 1949 had cost some large growers as much as \$50,000 a night in lost fruit and stock and had ruined some 3 million of the Valley's 12 million citrus trees.

Starting on January 29, 1951, temperatures ranging from 18° to 20° gripped the Valley for several days. Except for five hours at 35°, the thermometer hung below freezing for 92 consecutive hours.

The disastrous result: 7,700,000 of the 9,550,000 producing trees were killed. In addition, most of the 2 million new trees planted since the 1949 freeze were destroyed. With loss in the multi-millions, Texas' once great citrus industry seemed wiped out.

But optimistic Valley men thought differently. Planting part of their blasted acreage in quick-dividend cotton and vegetables to tide them over, they developed new rootstock and started replanting their citrus groves. One grower, Stanley B. Crockett, owner of Crockett Groves, Inc. and director of the First National Bank of Harlingen, expressed the typically optimistic, typically Texan outlook of the Valley:

"The Big Freeze of '51 delt a terrific blow—California and Florida termed it a 'fatal' blow. Yet, far from being fatal, those freezes actually are



Stanley Crockett examining fruit.

turning out, over the long run, to be a blessing. Based on actual replanting experiences since the freeze, I feel we can reasonably expect 50 percent more fruit per acre per year from the new orchards, which are being replanted just as fast as good stock is available. This is brought about by better trees, better budwood, planted in our very best citrus land, with practical application of our citrus production know-how. The Freeze cleared the way for us to reap greater dividends from our research dollars."

To safeguard their investment against future freezes and drouths, growers reset their orchards with care. Sites were selected with an eye for:

*Proper soil drainage.* The subsoil must be free from tight clay layers, which trap water in pockets and cause accumulation of soluble salts. Such spots eventually become too salty for good citrus growth. Where natural drainage was not adequate, farmers have installed subsurface tile drainage systems.

*Water sources.* Because of proper planning for water needs, the citrus industry has been able to regain

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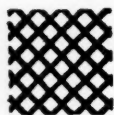
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**REGIONAL REPORT**

ground in the last several years, in spite of increasingly grave drouth conditions.

*Soil texture.* This is a more important factor than soil fertility, since Valley soils respond so well to proper fertilization.

*Topography.* Gentle slopes are the best sites for orchards because the cold air drains from them and does not form frost pockets as it does in low places.

*Windbreaks.* These rows of trees, frequently palms, protect against the high winds that bring the coldest temperatures, protect sand, and whip the branches.

Nursery production was run at full capacity and trees were set out as fast as seedlings could mature in the seed beds. Usually, citrus trees are not planted until they are two years old. They reach full production four to six years later. Thus the trees which were planted in 1951 and 1952 directly following the freeze are now beginning to bear fruit in sizable quantities. The following table outlines the Valley's progress on the long road back.

Orange trees weather the 1951 freeze much better than grapefruit trees. Although the 1951-1952 crop of oranges was destroyed (only 300,000 boxes were marketed), the trees did produce a respectable crop the next year (1 million boxes marketed). A large part of the 1,850,000 citrus trees left after the freeze were orange trees; almost all of the grapefruit groves had to be bulldozed over and planted anew. Thus the gains in producing citrus trees since 1951-1952 have been mainly in grapefruit.

These gains have been steady, and from the 1951-1952 low of 1,850,000, the number of producing trees has increased 78.4% to 3,300,000 in 1955-1956. In the same period, the *total number* of trees has increased from somewhat over 3 million to almost 4 million. Growers are predicting that by 1965, their tree losses will have been completely recouped. And, in the words of one veteran grower, "they'll be better trees, producing better fruit—meaning a wider market acceptance and more money to the grower." The comeback has been hard, and it's not over yet. But it is clear that the Valley citrusmen have backed a winner.

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## REGIONAL REPORT

### Business Volume Climbing At Fla.'s Port Everglades

PORT EVERGLADES, FLA. Florida figures have a way of being startling these days, but, when a 2,100 per cent increase takes place—that's news, even for booming Florida. According to the U. S. Customs authorities on the ground, collections at Port Everglades and the Broward International Airport increased from \$48,239 in 1949, to \$1,039,161 for the first three quarters of 1955 alone.

The fabulous port among the palms—Port Everglades—has shown an increase in vessels arriving from 361 in 1948 to 712 in 1955. Waterborne commerce has increased from 1,915,000 tons in 1948 to 3,712,435 tons in 1955—in transit tons from 725,251 to 2,333,847 in the same period. Gains so far in 1956 have been showing an even greater acceleration in all factors involved.

To care for the already large increase in traffic and for the expected continued increase, the Port Authority has on hand \$1,600,000 in revenue bonds and other sources with which they will finance the first phase of their long-range program. Walter P. Hedden, formerly with the Port of New York Authority, has been in charge of the planning and the first phase is already under construction. It includes six separate projects:

(1) Construction of 1,600 lineal feet of steel and concrete bulkhead on the east end of Pier No. 4. This will create three additional marginal berths on a pier having a back area of approximately 50 acres on which to construct transit sheds supporting warehouses and providing open ground storage areas.

(2) Construction of 700 lineal feet of steel and concrete bulkhead on the south side of Slip No. 1, Pier No. 5. This, together with other work now in progress, will complete that pier for the length of 1,200 lineal feet, with a 100-foot wing-wall, and provide two more berths having a water-depth of 35 feet.

(3) A 16,000 square feet transit shed has been completed on the east end of Pier No. 2, and an 80,000 square foot transit shed will be constructed on Pier No. 4.



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## REGIONAL REPORT

(4) The marginal wharf on Pier No. 1 will be so constructed as to include facilities for handling trailer ship operations.

(5) The ancillary facilities necessary for the complete utilization of the new major facilities are now being built, including roadways, railroad trackage, paved areas, freshwater lines, sewage connections, and other improvements.

(6) Although all present water facilities of Port Everglades have a depth of 35 feet at mean low water, the dredging work in front of Pier No. 4 is being done with a depth of 30 feet with one foot over-depth, since this area is included in a Federal project for the extension of the turning basin, north and south, and dredging to a depth of 37 feet at mean low water. When this project is completed, all water facilities will be improved to a standard depth of 37 feet.

Dr. Reinhold P. Wolff, director of the Bureau of Business and Economic Research, University of Miami, Miami, Florida, has completed an economic survey of Port Everglades and its relationship to the South Florida area. Together with Hedden's Long Range Port Plan, this gives a basic picture of the future of the port, on which the expansion and improvement plans are being intelligently based.

In addition to the improvements by the port itself, a number of its tenants are also expanding. Ponce Products, Inc., which is spending \$3,000,000 on improved facilities, is carrying out the largest expansion. This company brings bulk cement to Port Everglades from its plant in Ponce, Puerto Rico. It is stored at the port and distributed in bulk in the South Florida area. The present expansion will triple its capacity.

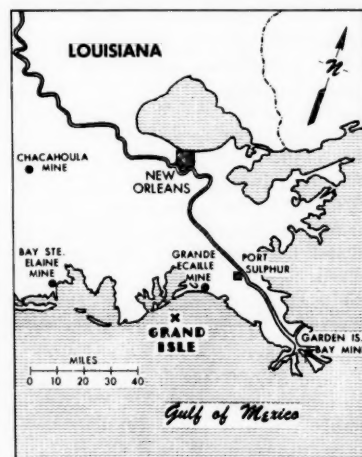
Inbound petroleum constitutes some 65 per cent of the traffic movement at Port Everglades. The total capacity of tank storage of petroleum products is 4,211,462 barrels, with an additional 450,000 barrel capacity currently under construction.

There is a million barrel tank storage capacity for molasses. The bulk of this molasses is shipped from Cuba, held for storage in bond and then trans-

shipped to England, although a small percentage of this molasses is also used domestically in the South Florida area in cattle-feed mixtures.

Other cargoes moving through Port Everglades in quantities are: lumber from the Pacific Coast, Brazil and Columbia; steel and steel products from Europe; glass; beet pulp, and general cargo from Europe.

The use of Port Everglades has increased on a one-to-one ratio with the increase in the population of South Florida, which is one of the fastest-growing areas in the United States.



### Freeport Mining Sulphur Six Miles Off La. Coast

NEW YORK. The first completely offshore sulphur mining operation in history will be undertaken by Freeport Sulphur Company at a deposit discovered in the Gulf of Mexico by Humble Oil & Refining Company, it has been announced.

The deposit, located off Louisiana in 45 feet of water six miles from the nearest land, represents a "major new source of sulphur," according to a joint announcement by Hines H. Baker, president of Humble, and Langbourne M. Williams, president of Freeport.

Under a contract signed by the two companies Freeport will design, install and operate a mining plant to produce sulphur by the Frasch hot water process. Construction is required to begin by the latter part of 1958 and is expected

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to take two years to complete.

"The deposit, known as Grand Isle—Block 18, was discovered by Humble in the course of offshore oil exploration," the announcement stated. "It ranks among the most important sulphur discoveries of recent years."

The sulphur was found approximately 1700 feet below the floor of the Gulf in the caprock of a salt dome, a geological formation commonly found in the Texas and Louisiana Gulf coastal area.

### New "Car Shrinker" Saves Goods Shipped In Boxcars

HOUSTON. A "car shrinker" that sneaks up behind shifting cargo in box cars and holds it in place to prevent damage is being tested on trains running between here and Chicago.

The device was invented by Glenn L. Wilkes, of Shell Chemical Corporation.

It consists of a pair of movable plywood bulkheads, each fitted with a system of rods and ratchets. One bulkhead is set at each end of the car. If the cargo shifts, the bulkhead follows and is locked in place by ratchets. No matter which way the cargo moves, a bulkhead closes in and holds it.

### Texas Instruments Shows Large Man-Made Crystals

DALLAS. Mammoth man-made single crystals—the largest ever reported—of the elements germanium and silicon are currently being displayed by Texas Instruments Incorporated. The monster jewel-like crystals—while measuring about half a foot in diameter — are not mere laboratory

curiosities, for they have important uses in electronic equipment.

Both germanium (a rare element) and silicon (the second most common element) belong to the class of "semiconductor materials." Diamonds also fall in this class and the huge Texas Instruments crystals are true precious jewels, with a perfection surpassing that found in nature.

Semiconductor materials — which have become economically significant only in the last decade—have two basic unique properties. One, they can selectively conduct electrons, and two, they are transparent to infrared radiation.

### Firm To Help New Industry Founded At Ponca City

PONCA CITY, OKLAHOMA. The Ponca City Chamber of Commerce is forming a new industrial organization to be known as the "Ponca City Industrial Foundation, Inc." The purpose of this organization is to assist in financing buildings, real estate, equipment, etc. for new and established industries.

The unique feature about this project is that it starts out with an initial capital investment of \$26,000, all of which has been accumulated through the transfer of Chamber of Commerce reserve funds and profits made by the sale of real estate, interest on industrial loans, etc. No stock will be sold, but the corporation has the authority to borrow money from banks or individuals on interest bearing debentures, bonds or notes. The corporation will be non-profit and will be owned entirely by the Ponca City Chamber of Commerce.

### Modern Wind Tunnel In Use At Tullahoma, Tennessee

BALTIMORE, MD.—A new type wind tunnel—capable of realistically simulating the 11,000 mile-per-hour speeds and 15,000-degree temperatures predicted for long-range missiles and aircraft of the future—has been placed in operation by the Air Research and Development Command at Tullahoma, Tenn.

Still higher speeds and temperatures are anticipated for the tunnel which is one of the facilities at ARDC's Arnold Engineering Development Center.

Although the tunnel's test runs last only about one-hundredth part of a second, much valuable data has been achieved by "flights" of precisely scaled models of missiles, aircraft or theoretical aerodynamic shapes mounted in the 16-inch diameter test section of the hypersonic tunnel.

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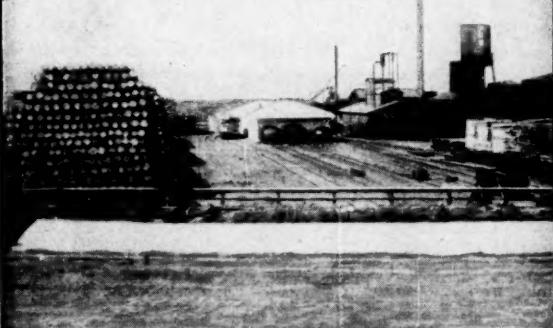
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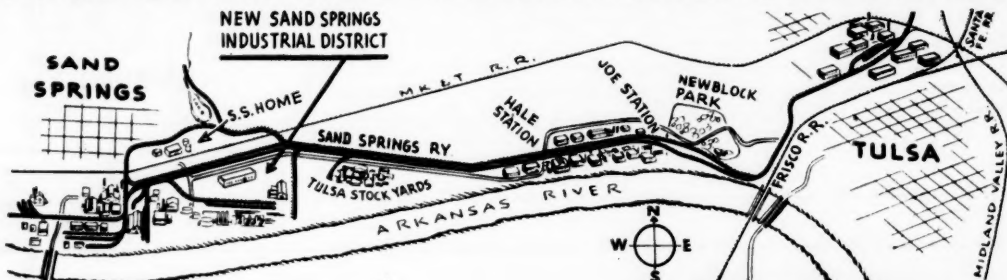
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"Are those curls?" he asked.

"No, dear, they're waves."

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### A Bit Potty

The Georgia clay, found in such quantities and in such excellence, is bringing potteries to the state in numbers. It is also responsible for the following:

"Hear your son's working for the new pottery, Seth."

"Sho' is, he's a psychiatrist over there."

"A what?"

"A psychiatrist. He looks after the cracked pots."

### Does Friendship Pay?

For about a year now, William Harrell of Tampa, Florida, has been watching an animal show in his back yard. Robert, a big tomcat owned by Harrell, started in a year ago to permit a large frog, whom Harrell called Oscar, to share his catfood. The cat and the frog got along fine until, from developments, it appeared that the frog was not Oscar, but Gertrude. She brought a family of little frogs along and, at mealtime, the frogs wait on the back steps until Harrell sets out the catfood. It agrees with them, too. Gertrude has grown to be such a giantess that now she frequently shoves Robert out of the way with her strong hind legs. He mews plaintively, but the frog situation has him hopelessly befuddled. He now seems almost pitifully grateful if the frogs let him eat his own food with them.

### The Goat Man

Chess McCartney keeps a flock of 26 goats. This, in itself, would not seem to pose any problems for State Highway Departments in the South, but it certainly does—every summer. For Chess, who normally lives in Macon, Georgia, goes roaming when the weather gets warm, and he takes his entire flock of goats with him and, in the last 20 years, they've walked something like four million every year along the public highways. Chess and his procession of 26 goats, together with the small mobile home and a cart which he drags along with him, have confounded motorists all over the South, but Chess goes calmly on his way: "Half the road belongs to me," he says, "and my taxes are all paid up. Me and my goats—and the stink—got as much right to the highway as anybody. God made us all." Chess is a preacher by avocation and, each Sunday at 4 p.m., the procession halts wherever it may be and Chess preaches a sermon.

—CHARLES LAYNE

## A SOUTHERN REPORT



ENGINEERS measure maps of the Coosa River basin on their hands and knees to gather information on the area. Data helps in determining the most favorable locations for future dam sites.

### *It takes dynamic electric power developments to keep pace with Southern growth!*

DEMANDS for electric power in the Southland are higher than ever as the region's tremendous industrial and agricultural progress continues. And the investor-owned electric power companies of The Southern Company system are continually moving ahead to meet this challenge of the future.

For example, new power producing projects under construction or completed this year have a total generating capacity of 1,026,250 kw. Major projects proposed for the future are the Coosa River hydro development of 421,700 kw., the Warrior River hydro development of 205,000 kw., and the 1,000,000 kw. steam generating plant on the Coosa River.

Electric power increases of this nature are sound measures of the area's strong new economy. Too, they are steps in league with the long, swift strides of Southern progress.

Shaded section designates area served by the four investor-owned electric power companies in The Southern Company system.



Alabama Power Company	Gulf Power Company
Birmingham, Alabama	Pensacola, Florida
Georgia Power Company	Mississippi Power Company
Atlanta, Georgia	Gulfport, Mississippi

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# Rolling Steel Doors

*Save Space Under Restricted Operating Conditions!*

Illustrated below is another unusual shipping dock application in which no other type of door could meet the operating space requirements. In three openings, 38'-0" x 14'-0", at the entrance to an enclosed subterranean shipping dock adjacent to a vehicular tunnel under a fabulous suburban shopping center, three Mahon Power Operated Rolling Steel Doors provide the quick, timesaving, space-saving operating features demanded in this compact, easily accessible freight handling facility. Each rolling door serves an unusually wide opening to permit trucks in the tunnel to quickly back into angular loading platforms. Quick-opening, quick-closing power operated rolling steel doors, with signal arrangements and push-button control stations, offer the ultimate in convenience and timesaving operation . . . and, the all-metal construction in rolling steel doors provides the permanence, security and fire-safety which assures a lifetime of trouble-free service. When you are ready to select a rolling steel door, it will pay you to check specifications carefully . . . you'll find extra value features in Mahon doors—for instance, the galvanized material in Mahon curtain slats is BONDERIZED and DIP-COATED with synthetic enamel which is baked on at 350° F. prior to roll-forming. You will find other quality and design features in Mahon Rolling Steel Doors that add up to a greater over-all value. See Sweet's Files for information and Specifications, or write for Catalog G-57.

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Three Mahon Power Operated Rolling Steel Doors, 38'-0" x 14'-0", at the entrance to an enclosed subterranean shipping dock off a vehicular tunnel under "Northland", Detroit, Michigan. Owners: Northland Shopping Center, Inc. Architects: Victor Gruen & Associates. General Contractors: Bryant & Detwiler.

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